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Missouri Medicine

Journal of the Missouri State Medical Association

January 1995

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In this Issue:

- ☐ Patient Protection Act
  Intractable Pain Act
  Insurance Market Reform Bill
- ☐ Legislative Directory
- ☐ Practice Management:
  To Merge or Not To Merge
- ☐ Ophthalmology Quiz #12
- ☐ Stereotactic Surgery in the
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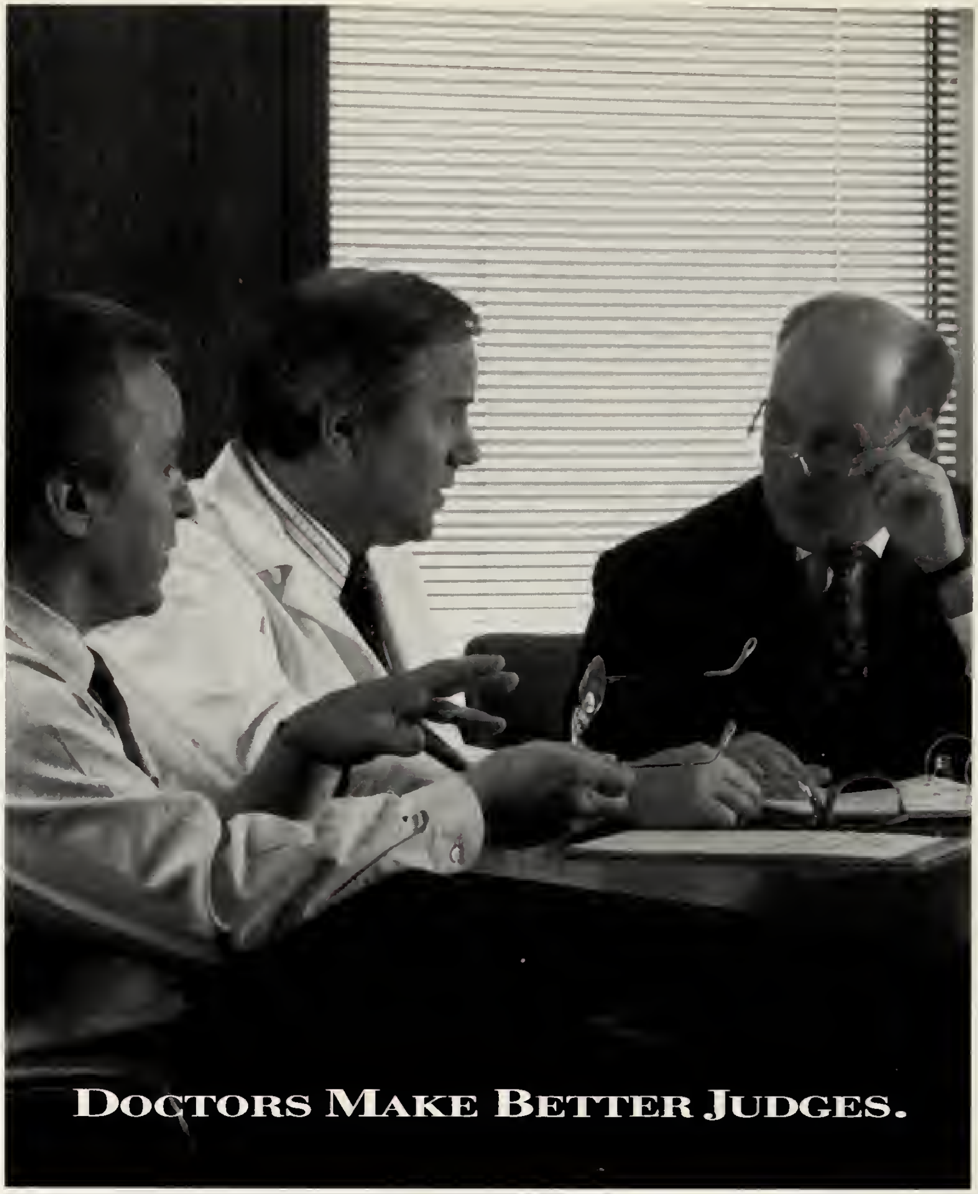
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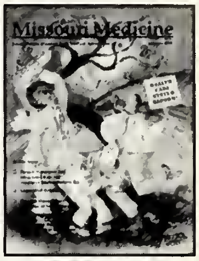
MISSOURI MEDICINE

VOLUME 92, NUMBER 1

Cover Story

The Legislative Agenda 22
Patient Fairness Act 24
Intractable Pain Act 27
Insurance Market Reform Bill 29
Legislative Issues 30
State Legislators 35



The Legislative Dance

This 14" x 16" watercolor pokes fun at the dance-like gesticulations that occur during the legislative session. None of the individuals involved make eye contact with each other but instead are deeply involved in a solitary interpretation of the annual ritual. Meanwhile, an invisible audience of city and rural citizens follow the action via television. The swirling clouds on the horizon warn of coming change while the twisted limbs of the old tree tell of past windstorms.

The first person who pledges a contribution of $1,000 or more to the MSMA Health Education Foundation will receive this original art work. The artist is Dennis Weiser, Jefferson City, Mo.

Editor's Desk

It's 6 am, Do you know where your children are? 7
J. Regan Thomas, MD, Editor

Ophthalmology Quiz #12 *John C. Hagan III, MD* 19

Perspectives

New Report Exposes Trial Lawyers' Political Clout 8
Arthur H. Gale, MD

Practice Management

Physician Leadership: Part 4 10
Directing the Process of Integration
Tom Bennett, Executive Vice President, MSMS, Inc.

Scientific Section

Stereotactic Surgery in the Management of Intracranial Disorders 734
Edward V. Colapinto, MD, FRCS(C), Gregory A. Brandenberg, MD, PhD, John J. Oro, MD and David F. Jimenez, MD

Membership Notes 15
Alliance Message 33
Information for Contributors 41
Historical Record 47
Classified Advertisements 49
CME Calendar 50

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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Editor's Desk

It's 6 AM, Do you know where your children are?

J. Regan Thomas, MD, Editor

I really try to be a good Dad. My attempts at setting good examples for my children are genuine. Sure, like all parents I periodically slip up and lose my temper, kick the flat tire, sneak a couple of cookies earmarked for the bake sale, play basketball in good pants, or walk through the house eating cake without a plate. I'm fortunate to have three great kids who never fail to make me proud. They make good grades, they are well behaved, they usually change into shorts or jeans before backyard basketball, and are typically quite responsible. Responsible, that is, except for one area: they won't get out of bed in the mornings.

Now I've never been a morning person but I make the commitment to get up in the mornings and initiate a daily ritual entailing dragging the kids out of bed. At a minimum, this involves multiple broken promises of "OK, I'm getting up now," only to find a near comatose adolescent five to ten minutes later who has no memory of any human contact thus far during the morning. This routine not infrequently results in a last minute dash from the house to arrive at school on time. This goes on in spite of the best of intentions and sincere resolutions the night before.

Where did I go wrong? These are bright, hard-working kids who must have some genetic defect (no doubt from their Mother's side of the gene pool) which does not allow full cerebral function until at least 11:00 a.m. Did I somehow fail during their younger years to instill a sense of responsibility? Who's fault was this chronic post dawn somnolence?

Thankfully, a Minneapolis sleep disorders center has research to show that maybe it's just natural for teenagers to need more sleep. In particular they need to sleep later in the mornings. The study got enough attention, and maybe rang true to enough families, that the *AMNews* reports that even the Minnesota Medical Association has become involved. The MMA has contacted the state's 450 school districts to suggest that school start later in the morning. It turns out that my children are neither cursed nor congenitally lazy. In fact, thanks to the Minnesota Medical Association, I now know that families everywhere are sharing my morning frustrations. It's always nice to realize, "we are not alone."

Apparently adolescents are not normally alert in the morning and have biologic clocks that tend to make them go to sleep late and wake up correspondingly later. That tendency to stay up late has historically been felt to be part of a teenagers need for certain social challenge. In addition, they need more sleep over all. Probably $9^{1}/_{2}$ hours are required for most teenagers. Many teenagers average only $6^{1}/_{2}$ to $7^{1}/_{2}$ hours of sleep during school nights. The MMA's program to start school later is, in part, responding to these recent studies. Apparently simply trying to make teenagers go to bed earlier is doomed to failure as it competes with the teen's normal internal timetable for sleep.

Serious possibilities related to poorly rested teenagers should be considered. Significant numbers of young people report falling to sleep not only in school, but also when driving. A North Carolina study in 1990-92 reports that 16 to 25 year olds accounted for 55% of accidents from automobile drivers falling asleep. Motor vehicle accidents are the second highest cause of death in that same age group. Alcohol compounds the risk for a sleep-deprived driver.

The Minnesota Medical Association has provided me a tremendous service and certainly relieved my concerns about parenting skills related to teenage sleep preferences. I see an opportunity for the Missouri State Medical Association to provide similar service for the parents of teenagers. Perhaps, they could tackle the reason why teenagers play music so loudly. Is there an adolescent auditory blockade that requires music to be played at a minimum of 90 to 100 decibels to be enjoyed? Get to work MSMA. Desperate parents of teenagers are waiting for your help. MoMed

New Report Exposes Trial Lawyers' Political Clout

Arthur H. Gale, MD, St. Louis Metropolitan Medical Society

America's political structure is based on the two party system. From time to time, a significant third party springs up, like Ross Perot and his followers' thrust in the 1992 presidential election. But when we think of a third party, we usually think of a small party with less than 5% of the vote and which has little political clout.

A recent report by the American Tort Reform Association (ATRA) informs the public about a powerful third party which deliberately works in the shadows and wields enormous influence.

The report entitled, "The Plaintiff's Bar, America's Third Political Party" found that in just three states -- Alabama, California and Texas -- between 1990 and 1994, the plaintiff's bar contributed $17.3 million to candidates for state office. In order to put that figure into perspective, the Democratic National Committee gave $12.4 million to state candidates and parties *in all 50 states* during that same period of time. The Republican party gave $10.8 million to state candidates during that period. It turns out that trial lawyers have more financial resources available for candidates than do the two major political parties.

"In Missouri there are only a few thousand trial lawyers in a population of over five million, who by virtue of their having access to huge sums of money have become the equivalent of a third political party."

As an example of how much one candidate can receive, former Texas governor, Ann Richards, alone received $2.7 million since 1990 from the trial lawyers.

And what about individual gifts from the trial lawyers themselves? According to a recent *Wall Street Journal* article, William LeRach of San Diego gave $403,301 to candidates from 1989 through June 30, 1994. Norman Tripp and his wife of Ft. Lauderdale donated $144,815, and Tommy Boggs, the national lobbyist for the American Trial Lawyers Association (ATLA), contributed $66,908.

The ATRA report goes on to state that the trial lawyers' contributions are made with one single goal in mind -- "preserving the status quo of litigation by defeating tort reform."

The ATRA study was the first of its kind to use a computer to cross-check Federal Election Commission (FEC) records of campaign giving with ATLA's membership.

What, for example, do the trial lawyers contribute in Missouri and nearby states? We may never find out because another important conclusion of the study is that many important contributions are virtually impossible to trace. For example, ATRA's researchers determined that four political action committees (PACs) in Alabama transferred funds nine times in the course of two days in May of 1994. ATRA says that it is "beyond dispute that the purpose of these multiple transfers was to obscure the trail of a contribution from the donor to the ultimate recipient. These lawyers do not want the public to be aware of their political clout."

How did contributions from the American Trial Lawyers Association (ATLA) affect the last Congress? A recent *Wall Street Journal* article reported that ATLA members contributed to five Senators who provided key votes to sustain a filibuster that blocked tort reform. Two examples are Harris Wofford of Pennsylvania who received $158,000 and Bob Kerrey of

Nebraska who received $52,000 *after* he switched his vote at the last minute to sustain the anti-reform filibuster.

When the Mitchell Health Bill was introduced in the Senate some months ago, many observers believed that it would contain significant medical liability reform measures. After all, the leading Senate committee which studied liability reform came out in favor of tort reform. Our own former senator from Missouri, Jack Danforth, who served on this committee is a strong supporter of tort reform.

The AMA as well as many other professional associations and many small and large manufacturers also lobbied hard for liability reform. In addition, a number of public opinion polls show that the vast majority of the public support tort reform. Despite the lobbying of all of these groups, in the end the Mitchell bill contained no significant tort reform.

I spoke to an AMA lobbyist just after the Mitchell bill was introduced. He said that Tommy Boggs, the legendary trial lawyer lobbyist, was sitting in the front row of the committee room with a big smile on his face when Senator Mitchell introduced the bill. The trial lawyers "had gotten to" Senator Mitchell.

It turns out that the trial lawyers, even though their numbers are small, are more influential than a cross section of voters representing professional associations, large and small manufacturers and the majority of the public. It is no wonder that many feel that we will never have a truly representative government without enacting campaign finance reform.

All of the news on the liability front is not bad. Mitchell and Wofford are gone from the Senate. The most important friend of the trial lawyers in the House, Rep. Jack Brooks of Texas, was finally defeated in his bid for re-election. As Chairman of the House Judiciary Committee, he was able to throttle any reduction of punitive damages awards -- the most important of all targets of tort reform from the point of view of the plaintiff's bar.

"A recent *Wall Street Journal* article reported that ATLA members contributed to five Senators who provided key votes to sustain a filibuster that blocked tort reform."

But physicians and other supporters of liability reform can never underestimate the power and resiliency of the trial lawyers. Nothing talks like money, and the trial lawyers have plenty of that commodity. They will try to block reform and influence the new Congress, just like they have the old.

Whenever surveys of physicians are undertaken on health system reform, the high cost of medical care, or simply what physicians consider most important in their practice, medical malpractice reform is at the top of the list. But most physicians (unlike trial lawyers) do very little concrete about supporting tort reform.

One simple way to support tort reform and to become informed on what is happening across the nation in this area is to become a member of the American Tort Reform Association. The Missouri State Medical Association, the St. Louis Metropolitan Medical Society and the Medical Staff association of one hospital on whose staff I serve are members of ATRA. All Missouri county medical societies and hospital medical staffs should consider becoming members of ATRA. The cost is modest.

ATRA is not a political organization. It supports no candidates. It is non-partisan. It assists grass root groups of citizens who are against lawsuit abuse by informing them and the general public on the status of state and national bills that affect tort reform. It tells which Senators and Representatives support and which oppose a particular bill. It conducts studies and surveys on tort reform such as the one cited in this article.

The address of the American Tort Reform Association is:
1212 New York Avenue, NW
Washington, DC 20005

ATRA has performed a valuable service by exposing for the first time in detail the enormous influence of a tiny interest group (in Missouri there are only a few thousand trial lawyers in a population of over five million) who by virtue of their having access to huge sums of money have become the equivalent of a third political party. MoMed

Dr. Gale is a private practice internal medicine physician in Overland, Missouri. He is past president of the St. Louis Metropolitan Medical Society and currently serves MSMA as an AMA Alternate Delegate.

Physician Leadership: Directing the Process of Integration

Tom Bennett, Executive Vice President, MSMS, Inc.

> *"Leaders have a significant role in creating the state of mind of society. They serve as symbols of the moral unity of the society. They can express the values that hold the society together. Most important, they can conceive and articulate goals that lift people out of their petty preoccupations, carry them above the conflicts that tear a society apart, and unite them in pursuit of objectives worthy of their best efforts."*
>
> -John W. Gardner, ***No Easy Victories***

"To merge or not to merge, that is the question."

That is indeed the existential question which many physicians throughout Missouri are asking as they debate their own future and the future of medicine. The following article will serve as a guide to assist physicians who are in the process of integrating their practices and/or groups, or those who are seriously contemplating some form of integration.

In response to the industry's move towards managed care, physicians' practices will undergo some form of integration/consolidation. They also will simultaneously require considerable modernization of the management, operational, financial, and marketing practice aspects.[1]

Integration has developed rapidly from the IPA/PHO mode towards more tighter integration along the lines of clinics without walls, limited liability corporations, fully integrated groups by specialty and multispecialty. Another popular vehicle being used in tandem with these models is the Management Service Organization (MSO). This corporate vehicle can provide contracting/negotiations, legal, accounting, actuarial, MIS, centralized billing, facilities planning/management services, and group purchasing for such things as health insurance, supplies and malpractice insurance. It can also become a major source for capital for continued growth and development of the entity.

All of those models provide a vehicle for physicians to become better organized and have more collective clout when it comes to negotiating/marketing services either through managed care organizations or directly to corporations. Initially, the marketing efforts to large corporations may appear to be fruitless. However, there is a huge secondary market of small businesses who are witnessing the continued rise in health care expenses and are looking for options to stabilize their expenses to provide value to them and their employees.

The dynamics which appear to be driving this integration movement include:

- The continued threat of health system reform at state and federal levels.
- The serious threat to physicians autonomy.
- The erosion of the physician-patient relationship.
- The loss of control over patient care management.
- Loss of market share/redirection of patients.
- Decrease in reimbursement rates.
- Increase in overhead.
- The power, dominance and financial resources of hospitals, insurance companies and managed care organizations.
- The aggressive strategies and tactics which are used to purchase physicians' practices in order to control patients.
- The competition to control the associated revenues associated with these patients, particularly the non-professional revenues from lab, radiology, home care, pharmacy, DME, respiratory, PT, OT, etc.
- The rapid shift of services outside of the traditional hospital setting to a community based setting in order to control cost.

In a recent study conducted by Sachs Group (1993 data) in analyzing the supply and demand for hospital beds in major metro markets, the study indicated that the metropolitan St. Louis area, population 2.5 million, has a current supply of 6.71 beds per 1,000 persons. The actual demand for beds is only 2.70, and under a managed care environment that demand would fall to 1.90, leaving St. Louis with 60 percent more beds than it needs. So, which hospitals are going to downsize or close? Who will control patients outside of the hospitals?

Throughout the changing medical environment, organized, merged physicians will have multiple opportunities to capitalize on the weaknesses and vulnerabilities of hospitals, insurance companies and managed care organizations to deliver high quality, cost effective, integrated services through a continuum of care by case management.

Remember: Physicians are the providers of care, not hospitals, insurance companies and managed care organizations are not providers of care. Organized, efficient, high quality providers can compete for the medical dollar and regain control over patient care management decisions and resource allocation.

The advantages of merging:

- ☐ By integrating, the competitive strength of merged physicians can make for a stronger position in the marketplace.
- ☐ A merged entity is able to share expenses, resources, avoid redundancies and reduce overhead.
- ☐ A merged organization can offer a broader range of services and has the potential to expand services.
- ☐ A merged organization is in a better position to negotiate and bargain with HMOs, PHOs and insurance companies.
- ☐ A merged organization affords greater shared capital resources, stability and financial security.
- ☐ A full-integrated network of providers is able to offer purchasers of health care options neither hospitals nor managed care organizations can provide (70 percent of services provided outside of a hospital setting).

To assist physicians in their deliberations over integrating their practices, there are some important guidelines to follow and questions to ask.

Guidelines to follow:

- ☐ Clearly define why you want to join a group or merge your group and find the appropriate legal vehicle to accomplish your goals.
- ☐ Understand the regulatory and legal constraints concerning fraud and abuse, self-referral limitations and anti-trust prohibitions.
- ☐ Profile the physicians with whom you will be working. Determine compatibility of vision, practice style, values and work ethic.
- ☐ If you are initiating a new group, develop a strategic business plan.
- ☐ Estimate the cost of the merger, the hidden cost in terms of time of physicians and loss of clinical revenue through the process of integration and the time commitment away from family/social/civic responsibilities.

Questions to ask:

- ○ What is special about your group that will attract patients and purchasers of services?
- ○ Will this organization be ready to take on risk, and if so, how soon?
- ○ Who is the leader(s)?

NOTE: The leader must be identified early.

- ○ Does the group(s) have competent management to ensure the operations are running efficiently and can carry out the strategic vision or goals?
- ○ Who owns the corporation? The more successful mergers are those where physicians are equal partners?
- ○ What is the governance structure of the corporation?
- ○ Can the corporate structure achieve the goals of the organization?
- ○ Is the physician compensation formula fair?
- ○ How will physician retirement plans be managed?
- ○ What will be the contribution/distribution of assets?
- ○ What will the culture of the group be?
- ○ What is the committee structure for facilitating the merger?
- ○ What is the process of decision-making?
- ○ How will conflict resolution be managed?
- ○ What will the political impact on the community?
- ○ What will be the impact on the relationship with hospital(s)?
- ○ What will be the impact on the competition?
- ○ What will be the impact on patients while the merge is in process?

Continued on page 12

Continued from page 11

- ❍ How will the merger be financed and what is the source of capital?

Keys to the venture's success:

- ● Careful selection of members into the group.
- ● Develop a mutual vision statement endorsed by all physicians.
- ● Early selection of the leader(s) who has the responsibility and the authority to make decisions.
- ● Develop a communication process which keeps all members informed.
- ● Develop attainable goals with a fixed time frame.
- ● Develop a comprehensive merger schedule which includes tasks/projects/leaders with specified time frames for accomplishment.
- ● Be aware of the potential for conflict of personalities which can impede the merge process. Keep the big picture in mind and always focus on the issues.

The foundation for success is a sense of TRUST. This is the very foundation of any relationship. Mistrust and misunderstandings will lead to many hours of fruitless labors.

In order to actualize these visions of integration and make them viable, there is one indisputable factor which is paramount to success: PHYSICIAN LEADERSHIP. Without the physician leaders(s), these integration initiatives are doomed to failure.

Leaders come in all shapes, sizes and disposition. However, they all share the following ingredients: vision, passion, enthusiasm, integrity, maturity, trust, willingness to take changes, and the ability to direct.[2]

The Process of Integration[3]

PHASE ONE: Establish the Framework for the Merger

1. Understand the Partners
2. Develop the "Strategic Vision"
3. Specify Objectives and Parameters
4. Identify Key Issues and Concerns

PHASE TWO: The Commitment Process

5. Letter of Intent
6. Earnest Capital

PHASE THREE: The Development of the Detailed Merger Plan

7. Develop Options
8. Evaluate/Reevaluate/Select Options
9. Develop and Approve Detailed Merger Arrangements

PHASE FOUR: Documents

10. Preparation of Required Documents
11. Develop Implementation Policies and Plans
12. Develop Timetable

PHASE FIVE: Implementation Process

13. Begin the Process
14. Evaluate/Reevaluate the Process

Acknowledgement:
I wish to acknowledge Lizabeth Starnes for her help with this paper.

References:
1. *A Valuation Guide for Medical Practice Mergers and Acquisitions.* AMA, Chicago, 1994.
2. Bennis, W. *On Becoming a Leader,* Mass.: Addison-Wesley, 1989, p. 39.
3. *Merger Table,* Partners Consulting Group, Minneapolis. 1994

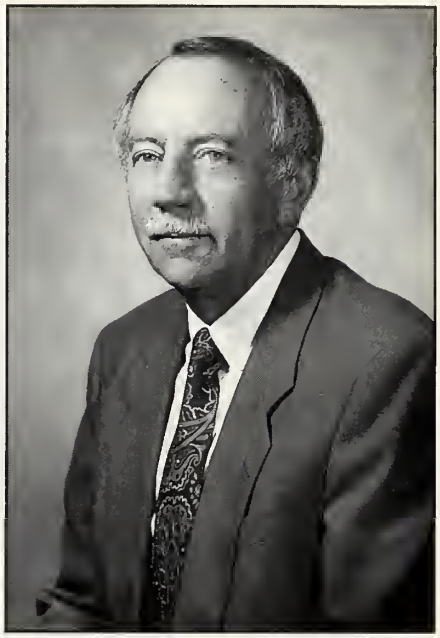
Suggested Reading:

1. *Group Practice Options: From Medical Corporations to Clinics Without Walls.* AMA Publication.
2. *Integration Issues in Physician/Hospital Affiliations.* MGMA publication, edited by Bette A. Waddington.
3. *Transforming the Delivery of Health Care: Mergers, Acquisitions and Physician-Hospital Organizations.* MGMA publication, authored by Keith M. Korenchuk.
4. *Merging Medical Practices.* MGMA publication, authored by Keith M. Korenchuk.

This is the fourth in series of articles by Tom Bennett, Executive Director of Missouri State Medical Services, Inc., on the topic of "Physician Leadership." This article is an outgrowth of a presentation he has deliver throughout the state and at the request of a number of physicians, it has been adapted to a narrative format. Tom can be reached at MSMS by calling 1-800-633-1516 or 314-842-4722.

New EVP emphasizes membership benefits, stronger communications

C.C. "Cork" Swarens begins tenure as MSMA Executive Vice President this month


C.C. "Cork" Swarens

C.C. "Cork" Swarens will become the new Missouri State Medical Association Executive Vice President this month, replacing Royal O. Cooper who retired Dec. 31, 1994, following a 26-year career with MSMA.

Mr. Swarens has worked 22 years for the MSMA, serving first as Director of Public Relations, from 1972-77, then as Executive Director and Chief Lobbyist, from 1977 to the present. Throughout his association management career, he has worked as an MSMA administrator, communications and professional information director, and as a liaison to state elected officials and state agencies. He has staffed committees on legislative affairs, planning, constitution and by-laws, and public affairs.

Mr. Swarens credits the success of the Association to extremely effective physician leadership and administrative leadership. "I know we have very qualified and dedicated physician leaders. I hope to carry on in the footsteps of Raymond McIntyre and Royal O. Cooper in providing the best, most complete staff support possible," he said.

Mr. Swarens brings a strong performance record and a thorough understanding of the Missouri medical profession. One of his first projects will be to review MSMA services now offered to its members "with an eye toward increasing benefits that are truly beneficial to physicians." Other goals include strengthening the communications between membership and the public and to increase physician involvement in the governance of the MSMA.

"We have the opportunity to increase the prominence of this Association. Physicians should know that MSMA is the preeminent state organization in Missouri representing medicine's viewpoints and that it is sought out for opinions and input on important medical issues. We must strengthen this standing through more active involvement of our members," said Mr. Swarens.

"Our top priority is membership. Without sufficient statewide physician representation, Association goals could suffer," said Mr. Swarens. "To build membership we must find ways to overcome physician apathy, communicate our accomplishments, and provide the services and representation physicians want."

Throughout his career as an MSMA lobbyist, he has represented the Association's medical interests in at least 50 bills each session and has overseen the tracking process of up to 300 bills.

"For more than 20 years in lobbying for the MSMA, there has never been a dull legislative session. Whereas many organizations may become actively involved in two to four bills a year, our Association usually tracks a wide range of issues such as Worker's Compensation, Medicaid, expansion of other professions' scope of practices, quality of care, medical records, insurance changes and, of course, health system reform," he said.

Mr. Swarens invites the ideas and suggestions of MSMA members as to how the Association can better serve membership needs. "Many of the services MSMA now provides originated not from staff or officers, but from individual members," he said. "Also, we are always in need of physicians who are willing to contribute some of their valuable time and expertise to represent the Association before legislative and administrative committees."

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Phone (______)_______________________
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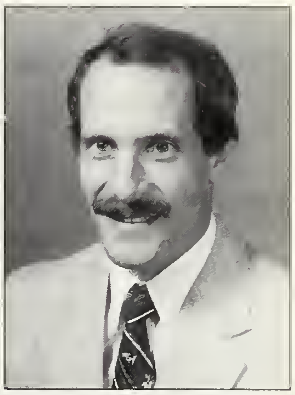
Membership Notes

Diane T. Brukardt, MD, was named 1994 Doctor of the Year by the Boone County Medical Society during their annual Holiday Gala. She is the first woman to receive this award. Dr. Brukardt is an associate professor of medicine and preceptor at the University of Missouri-Columbia School of Medicine. She was the faculty advisor for the Mortar Board and LSV Women's Honor societies at UM-C. She is a member of the American Medical Association, Missouri State Medical Association and the Boone County Medical Society. She has served as an AMA alternate delegate, and is currently a MSMA delegate. She was Secretary/Treasurer, President-Elect and President of the Boone County Medical Society. Dr. Burkardt was co-founder of the Visiting Nurses of mid-Missouri and has served on their board since 1972. As a member of the Altrusa Club, Dr. Brukardt helped establish the Women and Children's Shelter in Columbia and remains active in its support. She was a member of the Advisory Board to the Missouri State Committee on the status of Women from 1982-84. Dr. Brukardt was chairman of the Standing Committee on Health Legislation for the Missouri Division of the American Association of University Women from 1982-85 and served on the Governor's Committee to review nursing home legislation from 1982-83.

Diane T. Burkardt, MD

Keith A. LaFerriere, MD


Gregory J. Renner, MD

At the Fall meeting of the Fellows of the American Academy of Facial Plastic and Reconstructive Surgery, **Keith A. LaFerriere, MD,** of Springfield and **Gregory J. Renner, MD,** of Columbia were awarded the co-directorship of a fellowship program. The appointment is based on expertise and teaching abilities in facial plastic surgery. Drs. LaFerriere and Renner will provide advanced training and research in facial plastic and reconstructive surgery to a board certified or board eligible physician for a 12-month period. There are only 43 such accredited fellowship opportunities in this specialized area of the head and neck region in the United States that are sanctioned by the Educational and Research Foundation of the Academy. Dr. Renner holds a staff position as associate professor of surgery at the University of Missouri-Columbia School of Medicine, Division of Otolaryngology - Head & Neck Surgery. Dr. LaFerriere's private practice in facial plastic surgery is located in Springfield.

Jean A. Chapman, MD, received the 1994 Laureate Award from the Missouri chapter of the American College of Physicians. The award honors fellows and masters of the American College of Physicians who have demonstrated by their example and conduct and abiding commitment to excellence in medical care, education, research, and service to their community, their chapter, and the American College of Physicians. Dr. Chapman has been instrumental in helping the Education Committee of the American Academy of Family Physicians develop its core curriculum in allergy and immunology and helped develop community -based allergy and immunology programs in 62 different residency programs throughout the country. In addition, he teaches allergy and immunology to senior residents from Southern Illinois University School of Medicine. Dr. Chapman is an allergist practicing in Cape Girardeau.

Continued on page 16

Missouri State Medical Association members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

Membership Notes

Continued from page 15

Sidney Goldring, MD, professor emeritus of neurological surgery at Washington University School of Medicine, received the 1994 American Epilepsy Society-Milken Distinguished Neuroscientist Award for Epilepsy Research at the society's annual meeting. The award recognizes outstanding effort to alleviate seizure disorders that begin in childhood. Beginning in the 1970s, Dr. Goldring developed an electrophysiological procedure for identifying functional areas of the brain which is performed while the patient is awake. Dr. Goldring has written more than 100 scientific articles, has held a number of national advisory appointments, and is a member of many professional societies. He has served as president of the American Academy of Neurological Surgery, the American Association of Neurological Surgeons, the Society of Neurological Surgeons, and the St. Louis Neurological Sciences. Other honors include the Cushing Medal, the Distinguished Services Award and an Honorary Membership and Honored Guest from the Congress of Neurological Surgeons.

Ted Groshong, MD, was installed as president of the Boone County Medical Society at their December meeting. **Edgar I. Ailor, MD,** was installed as president-elect and **Michael C. Perry, MD,** was installed the secretary-treasurer of society. Dr. Groshong is an assistant dean at the University of Missouri-Columbia School of Medicine and a pediatric nephrologist. Dr. Ailor is a private practicing otolaryngologist. He practices at the Boone Clinic. Dr. Perry is certified by the American Board of Internal Medicine's subspecialty board of Hematology/Oncology. He is a staff member at University Hospitals and Clinics and practices at University Hospital, Harry S. Truman Memorial VA Hospital and Ellis Fischel Cancer Center.

PHYSICIAN'S RECOGNITION AWARDS

The following physicians have completed 150 hours of continuing medical education within a three-year period. Sixty of the credit hours are earned in Category I programs.

Archibald M. Ahern, MD, *St. Louis*
Jonathan D. Dehner, MD, *St. Louis*
Jacquelyn B. Dilworth, MD, *St. Louis*
George J. Fuchs, MD, *Columbia*
Lee V. Giorgi, MD, *Kansas City*
Henry N. Habib, MD, *Osage Beach*
Henry C. Krahn, MD, *Springfield*
Larry E. Legler, MD, *Independence*
N. Eugene Morrow, MD, *Springfield*
William D. Musick, MD, *Columbia*
Margaret E. Nichols, MD, *Joplin*
Kerry Randolph, MD, *Springfield*
Frank W. Shagets, MD, *Joplin*
Ravindra V. Shitut, MD, *St. Louis*
Theodoro C. Vargas, MD, *Pacific*

Robert N. Buffaloe, MD, was installed as president of the Cole County Medical Society at their December meeting. **Randall E. Meyer, MD,** was installed as president-elect and **Mark D. Winton, MD,** was installed as the secretary-treasurer. Dr. Buffaloe is a private practicing physician who has been associated with Jefferson City Family Practice, Inc. since 1988. Dr. Meyer is a private practice cardiologist. Dr. Winton is in private practice with Internal Medicine, Inc. He specializes in internal medicine and infectious diseases.

NEW MEMBERS

Barton

Lisa K. Reno, DO - FP
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University of Health Sciences,
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Boone

Stephen Braddock - PD
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Univ of Missouri-Columbia; 1988

Lori J. Dotson, MD - IM
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University of Missouri-Kansas City, 1987

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University of Arkansas, 1982

Membership Notes

Celia L. Chan, MD - HEM/ON
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Natl Taiwan Univ Coll of Med, Taipei, 1980

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James Quillen C.O.M., 1990

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St. Louis, MO 63108
University of Missouri-Columbia, 1988

Carla J. Siegried, MD - OPH
215 Dunn Rd, Florissant, MO 63031
University of Missouri-Kansas City, 1989

RESIDENTS

Duane E. Banet, MD - ***D***
Kenton C. Freeman - ***PMR***
Howard Pomeranz, MD, PhD - ***OPH***
Hernandez Rafael, MD - ***IM***

STUDENTS

St. Louis University

Steven D. Blair
Nancy R. Blanchat
Elaine M. Finley
Karen M. Gauvain
Brian E. Goertz
William M. Irving, Jr.
Timothy McNichols
Eric Pan
Jaime F. Recasens
Katerine T. Ward

Membership Notes

IN MEMORIAM

Walter A. Ashcraft, MD, 57, Crystal City, Missouri, was killed in a plane crash October 1, 1994. Dr. Ashcraft received his medical degree from the University of Kansas in 1964. He was a cardiovascular and thoracic surgeon at Jefferson Memorial Hospital in Crystal City since 1986.

Ralph R. Braunschweig, MD, 66, Columbia, Missouri, died December 11, 1994. Dr. Braunschweig received his medical degree at Hahnemann Medical College, Philadelphia, in 1959. He was chief of anesthesiology at Truman Memorial Veterans Hospital and an associate professor at the University of Missouri-Columbia. Dr. Braunschweig was an anesthesiologist at Veterans Administration Lakeside Medical Center in Chicago from 1975 to 1985. He was on the emergency medical staff at Alexiam Brothers Medical Center in Elk Grove Village, Illinois and was an associate with Winchester Anesthesiologists Inc. in Winchester, Virginia. Dr. Braunschweig was an assistant professor of clinical anesthesiology at Northwestern University Medical School and a visiting clinical instructor for the department of anesthesia at Northwestern. He also worked at Shenandoah College in Winchester and Winchester Memorial Hospital. Dr. Braunschweig had been appointed to the National Faculty for Advanced Cardiac Life Support. He was a member of the affiliate faculty for Basic Cardiac Life Support and was on the Respiratory Therapy Advisory Committee for the School of Health Related Professions at MU and a member of the Respiratory Therapy Advisory Committee at the Columbia Area Vocational Technical School. Dr. Braunschweig was a member of the American Heart Association, Missouri State and American Medical Associations, Commission on Medical Local Affairs, Boone County Medical Society, Southern Medical Association, American Society of Anesthesiologists, Missouri Society of Anesthesiologists Committee on Bylaws and Rules, American Association for Respiratory Care, American Association of University Professors and Association of Virginia Anesthesiologists.

Helen L. Bruce, MD, 87, St. Louis, Missouri, died after a brief illness December 5, 1994. Dr. Bruce received her medical degree at the University of Minnesota in 1931. She was commissioner of the St. Louis Health Department from the 1970s until she retired in 1981. She joined the department in 1947. Dr. Bruce was a former board member of the American Lung Association of Eastern Missouri, and the Visiting Nurse Association. She received the St. Louis Globe Democrat Woman of Achievement for health in 1976. The following year she received honorary membership in the St. Louis Metropolitan Medical Society. In 1980, she was recognized for her community contributions by the Hospital Association of Metropolitan St. Louis and in 1983 by the Human Development Corporation.

Sallie "Lisa" Elisabeth Drabinowicz, MD, 40, Springfield, Missouri, was killed in a car accident October 15, 1994. Dr. Drabinowicz received her medical degree at the University of Illinois at Chicago Health Sciences Center in 1980. She ran a private family medicine practice in Iowa before moving to Springfield. Dr. Drabinowicz was practicing at the Taylor Health Center at Southwest Missouri State University.

Samuel L. Gaston, MD, 64, Joplin, Missouri, died after a long illness, December 5, 1994. Dr. Gaston received his medical degree at the University of Arkansas in 1964. He received the Buchannan Key award as the outstanding senior medical student and was elected to the Alpha Omega Alpha honor medical society. In 1968, Dr. Gaston opened a private practice in radiology in Joplin. He was a staff radiologist at St. John's Regional Medical Center from 1968 to 1987, and was chief of the medical staff in 1974. Dr. Gaston was a consulting radiologist with McCune-Brooks Hospital, Carthage; Baptist Regional Health Center, Miami, Oklahoma; Baxter Springs, Kansas, Memorial Hospital; and Barton County Memorial Hospital, Lamar. He retired from full-time practice in 1988, and served on a temporary basis with hospitals at Searcy and Lake Village, Arkansas and Bolivar and Neosho, Missouri. Dr. Gaston was a member of the American College of Radiology, the Missouri Radiological Society, the Jasper County Medical Society, the Missouri State, Southern and American Medical Associations.

Ophthalmology Quiz #12

John C. Hagan III, MD

The patient shown in Figure 1 has had episodes of transient monocular blindness lasting 15-60 minutes. Today instead of the vision completely clearing, she has a persistent blind spot above fixation in the eye shown below. Chose the correct diagnosis.

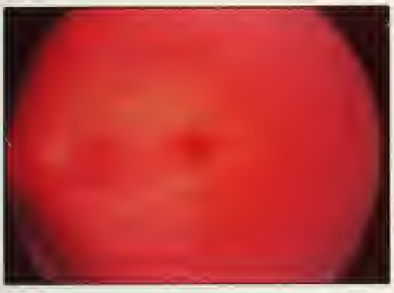


Figure 1

a. **Retinal detachment**
b. **Retinal infarction due to arterial emboli**
c. **Retinal infarction due to venous occlusion**
d. **Diffuse inflammatory chorio-retinitis**

The patient shown in Figure 2 has had severe occlusive vascular disease and a carotid endarterectomy. He complains of sudden painless loss of all vision in his eye except for a small area lateral to the point of fixation. What is the diagnosis?

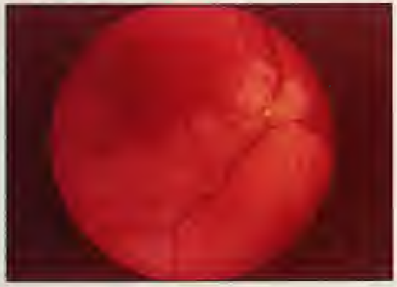


Figure 2

a. **Central retinal artery emboli with "cherry red spot"**
b. **Central retinal vein occlusion with "cherry red spot"**
c. **Retinal infarction due to ocular migraine syndrome**
d. **Retinal Detachment**

(See answers on next page.)

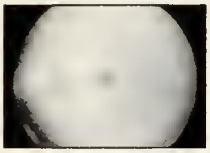
The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL, North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. Inc., O. H. Gerry Optical Co. and IOPTEX , Inc.

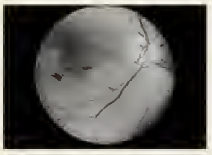
OPHTHALMOLOGY QUIZ ANSWER

(Ophthalmology Questions are on previous page.)

ANSWERS

1) b. Retinal infarction due to arterial emboli.
2) a. Central retinal artery emboli with "cherry red spot"





These cases are representative of the important symptom of amaurosis fugax. A recent *New England Journal of Medicine* editorial[1] discussed this problem, "Amaurosis fugax, or transient monocular blindness, is caused by an abrupt, temporary reduction of blood flow to one eye. The loss of vision is sudden, usually lasting seconds or minutes, Blindness is complete although it is sometimes limited to a sector of the field of vision. Often the blindness develops as if a shade were drawn upward or downward over the eye, rarely sideward. Attacks can be single or multiple. Some patients have hundreds or even thousands of episodes. Pain, scintillations, and diplopia are typically absent. In most patients the prognosis for recovery of the retina is good; in a few, retinal infarction occurs (as in both the cases presented).

The diagnosis is straightforward when the patient, after describing how he or she alternately covered each eye during the spell, states clearly that there was transient loss of vision in one eye. In less observant patients and in those with only one eye, however, transient hemianopia must be ruled out: it lasts longer and only rarely results from isolated ischemic attacks. Scintillations suggest ischemia of the calcarine cortex. Also, although partial retinal ischemia causes a visual defect with a horizontal border, ischemia of the central visual pathways typically causes a defect with a vertical one.

Amaurosis fugax is an important symptom that can be caused by a host of potentially severe conditions (Table 1). An expeditious, careful evaluation of each patient is mandatory.

Figure 1 shows a partial inferior retinal infarction. The infarcted retina is lighter in color due to swelling of the inner layers of the retina. The retinal artery emboli that caused the problem is visible as a bright, round spot at the 6 o'clock position on the edge of the optic nerve. These yellow-white plugs are called Hollenhorst plaques. They are visible at retinal artery bifurcations (Figure 3) and they represent cholesterol-fibrin emboli. If they are small enough or peripheral enough they may be asymptomatic.

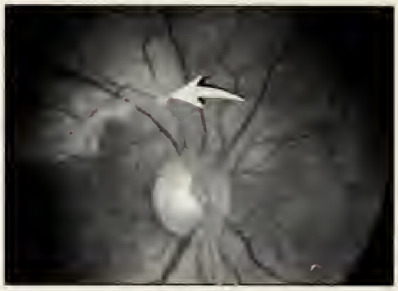


Figure 3 - The arrow points to a Hollenhorst plaque emboli in the superior-temporal retinal artery. Note that the area peripheral to the emboli is infarcted and has a pale, whitish appearance.

If the entire retina is infarcted such as shown in Figure 2 due to central retinal artery emboli after a few hours the typical "cherry red spot" is apparent. This is due to the fovea having a reddish appearance since it has a thin, attenuated inner layer and thus no swelling is present over it. A small area of normal, un-infarcted retina is visible immediately lateral to the optic nerve (Figure 2) and is due to retained blood supply from an unobstructed cilio-retinal artery. This accounts for the small area of retained vision (Case 2) in the temporal visual field.

References

1. Gautier, JC. Amaurosis fugax. *N Engl J Med* 1994;329:426-427.

2. American Academy of Ophthalmology: *Basic Ophthalmology for medical students and primary care residents.* 6th Edition, Frank G. Berson, Editor. San Francisco.

TABLE 1 - CAUSES AND MECHANISMS OF AMAUROSIS FUGAX

- **Occlusive arterial disease**
  - **Atherosclerosis of other lesions of the internal cartoid artery (e.g. spontaneous dissection)**
  - **Thromboemboli from the heart**
  - **Arteritis**
- **Low perfusion pressure**
  - **Multiple occlusions of extracranial cerebral arteries**
  - **Postural hypotension**
  - **Arteriovenous fistula**
  - **Intracranial hypertension**
  - **Glaucoma**
- **High resistance to retinal perfusion**
  - **Migraine**
  - **Malignant hypertension**
  - **Increased blood viscosity**
  - **Vasospasm**
- **Miscellaneous causes**
  - **Acute sharp pain**
  - **Irrigation of the antrum**
  - **Blowing the nose**
  - **Sensitivity to cold**
  - **Malaria Pregnancy**
  - **Paraneoplastic retinopathy**
  - **Interleukin-2**
- **No obvious cause**

Missouri Physicians' Health Program

Recognition of Contributors

(as of 12/22/94)

The Missouri State Medical Association and the Missouri Physicians' Health Program would like to thank the following institutions for their generous contributions to the MPH Program.

It is because of these gifts that the MPH Program can continue to assist physicians who are having life problems which prevent them from functioning at their best.

Baptist Medical Center Medical Staff, *Kansas City*
Barnes-St. Peters Medical Staff, *St. Peters*
Children's Mercy Hospital, *Kansas City*
Christian Hospital, Northeast-Northwest, *St. Louis*
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DePaul Health Center Medical Staff, *Bridgeton*
Freeman Hospital, *Joplin*
Heartland Health System and Medical/Dental Staff, *St. Joseph*
Incarnate Word Hospital and Medical Staff, *St. Louis*
Independence Regional Health Center and Medical Staff, *Independence*
Insurance Services, Inc., *Springfield*
Jewish Hospital and Medical Staff, *St. Louis*
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Missouri Baptist Medical Center, *Town and Country*
North Kansas City Hospital, *North Kansas City*
Pershing (General John J.) Memorial Hospital, *Brookfield*
Phelps County Regional Medical Center, *Rolla*
P.I.E. Mutual Insurance Company, *St. Louis*
St. Anthony's Medical Center and Administration/Medical/Dental Staff, *St. Louis*
St. John's Regional Medical Center, *Joplin*
St. John's Regional Health Center, *Springfield*
St. John's Mercy Medical Center and Medical Staff, *St. Louis*
St. Luke's Hospital, *Chesterfield*
St. Luke's Hospital of Kansas City, *Kansas City*
St. Mary's Hospital of Blue Springs, *Blue Springs*
Texas County Memorial Hospital, *Houston*
Truman Medical Center, *Kansas City*
Western Missouri Medical Center, *Warrensburg*

Physicians Respond to Patients' Needs:

PATIENT FAIRNESS ACT, INTRACTABLE PAIN ACT & INSURANCE MARKET REFORM BILL

MSMA has contributed to the drafting of three new bills which have been submitted to this year's legislature. The legislation addresses problems patients and physicians have with managed care, insurance market reform and prescribing guidelines for chronic pain.

The Patient Fairness Act has been created in anticipation of a wide variety of "health care reform" measures (*see pages 24-26 for a complete copy of the bill*). The act contains key elements of the AMA's Patient Protection Act.

"In last year's legislative session during the chaos and excited discussion around the proposed health bills there were a number of public forums. At each public forum Missouri citizens would ask, 'Where do you doctors stand on this, you know more about health care than anyone else. What do you guys think we should do?' The Patient Fairness Act is the physician's response to the public's request," said H. Jerry Murrell, MD, MSMA President.

Dr. Murrell invited the Missouri Association of Osteopathic Physicians and Surgeons and the Missouri Hospital Association to join MSMA to prepare reform legislation. Each sponsor organization named three members to the committee. Dr. Bill Crowley, MSMA representative, was named chairman of the joint committee. "The committee met and shared information several times, working hard to establish the Patient Fairness Act and insurance bill. The MSMA legislative committee served as a resource and monitor for the joint committee," Dr. Murrell said.

The Patient Fairness Act, supported by MSMA and MAOPS, will help many citizens who find the explanation of benefits and exclusions to be difficult to understand. Dr. Murrell said, "The Patient Fairness Act would attempt to force companies to use plain English explanations. Also, providers are usually not privy to the details of credentialing standards. Neither are they privy to standards leading to deselection. This bill would address these areas of uncertainty."

"Managed care companies are operating with little if any state regulation. Last year's all encompassing health package which was defeated would have brought considerable regulation to this industry. The Patient Fairness Act attempts to bring reasonable regulation in an incremental fashion," Dr. Murrell said.

The insurance reform bill, which is supported by all three associations - MSMA, MAOPS

HEALTH CARE SYSTEM REFORM!

and MHA - is designed to insure portability and to eliminate pre-existing illness clauses in insurance policies. It calls for a modified form of community rating for employees of companies with up to 500 workers *(see page 29 for bill highlights).*

In early November the bills were presented to the various component medical society presidents and specialty society representatives. "By involving the component and specialty societies, we hope to increase MSMA members' understanding of the bills so they may more effectively lobby their individual representatives," said Dr. Murrell.

MSMA is also offering a bill at the request of the Board of Registration for the Healing Arts. The Intractable Pain Act was drafted in close cooperation with the Board *(see pages 27-28 for a complete copy of the bill).*

"Physicians dealing with patients with malignant diagnosis rarely run afoul of narcotics regulations, however, in dealing with noncancerous conditions the guidelines are more unclear. This bill will attempt to set guidelines and parameters for physicians who deal with patients in long-term noncancerous intractable pain," said Dr. Murrell.

We can expect the managed care, insurance and business groups to actively oppose both the Fairness Act and insurance reform bill," said C. C. Swarens, MSMA Executive Vice President. "They will testify and lobby hard that these measures will increase their costs and, therefore, will increase medical costs to business and consumers," he added. MoMed

Brochures providing information about the Patient Fairness Act will be made available through MSMA. To receive brochures to distribute to your patients, contact the Missouri State Medical Association:
113 Madison, P.O. Box 1028, Jefferson City, MO 65102;
Tel: 314/636-5151; Fax 314/636-8552.

PATIENT FAIRNESS ACT HIGHLIGHTS

- ✓ **An individual or an employer is free to purchase health care services above and beyond those covered in a standard benefits package.**
- ✓ **All prospective enrollees must be provided truthful, plain-English explanations of a plan's exclusions, limitations, copayments and coinsurance, any hidden out-of-pocket expenses, and any limitations on choice of provider, referrals, or treatment options.**
- ✓ **Insurers must disclose prior authorization or other review requirements, and must provide enrollee satisfaction information.**
- ✓ **Insurers must provide adequate access to physicians and other providers, and must meet adequate financial reserve requirements.**
- ✓ **Physicians must have input into a health plan's medical policies.**
- ✓ **All plans must credential their own physicians and shall allow all physicians within their service area to apply for credentialing. The credentialing standards must be made available to all applicants, and the plan's credentialing body must have appropriate representation of the applicant's specialty.**
- ✓ **All credentialing decisions shall be made on the record, and the applicant shall be provided with all reasons used if an application is denied or a contract not renewed.**
- ✓ **Plans shall not terminate a contract without cause, and a due process appeal mechanism shall be established to consider adverse decisions.**
- ✓ **Prior to a termination of a contract for cause, the physician shall be provided an opportunity for discussion and an opportunity to enter into a corrective action plan.**

L0101.01

ROUGH DRAFT NO. 1
AN ACT
Relating to health care.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF MISSOURI, AS FOLLOWS:

Section 1. As used in sections 1 to 3 of this act, the following terms mean:

(1) "Director", the director of the department of insurance;

(2) "Managed care contractor", a person that:

(a) Establishes, operates or maintains a network of participating providers; and

(b) Contracts with an insurance company, a hospital or medical service plan, an employer, an employee organization, or any other entity providing coverage for health care services to operate a managed care plan;

(3) "Managed care entity", a licensed insurance company, hospital or medical service plan, health maintenance organization, an employer or employee organization, or a managed care contractor that operates a managed care plan;

(4) "Managed care plan", a plan operated by a managed care entity that provides for the financing and delivery of health care services to persons enrolled in such plan through:

(a) Arrangements with selected providers to furnish health care services;

(b) Explicit standards for the selection of participating providers; and

(c) Financial incentives for persons enrolled in the plan to use the participating providers and procedures provided for by the plan;

(5) "Participating provider", a physician, hospital, pharmacy, laboratory, or other appropriately state licensed or otherwise state recognized provider of health care services or supplies, that has entered into an agreement with a managed care entity to provide such services or supplies to a patient enrolled in a managed care plan;

(6) "Qualified managed care plan", a managed care plan that the director certifies, upon application by the program, as meeting the requirements of sections 1 to 3 of this act.

Section 2. Nothing in sections 1 to 3 of this act shall be construed as prohibiting the following:

(1) An individual from purchasing any health care services with that individual's own funds, whether such services are covered within the individual's standard benefit package or from another health care provider or plan;

(2) Employers from providing coverage for benefits in addition to the comprehensive benefit package.

Section 3. 1. The director shall establish a process for certification of managed care plans meeting the requirements of this section. The director shall establish procedures of the periodic review and recertification of qualified managed care plans. The director shall terminate the certification of a previously qualified managed care plan if the director determines that such plan no longer meets the applicable requirements for certification. Before effecting a termination, the director shall provide the plan notice and opportunity for a hearing on the proposed termination.

2. An eligible organization, as defined in section 1876(b) of the Social Security Act, shall be deemed to meet the requirements of subsection 4 of this section for certification as a qualified managed care plan.

3. If the director finds that a national accreditation body establishes requirements for accreditation of a managed care plan that are at least equivalent to requirements established under subsection 4 of this section, the director may, to the extent appropriate, treat a managed care plan thus accredited as meeting the requirements of subsection 4 of this section.

4. The director shall establish standards for the certification of qualified managed care plans that conduct business in this state, including standards whereby:

(1) Prospective enrollees in health insurance plans shall be provided information as to the terms and conditions of the plan so that they can make informed decisions about accepting a certain system of health care delivery. Where the plan is described orally to enrollees, easily understood, truthful, and objective terms shall be used. All written plan descriptions shall be in a readable and understandable format, consistent with standards developed for supplemental insurance overage under Title XVIII of the Social Security Act. This format shall be standardized so that customers can compare the attributes of the plans. Specific items that shall be included are:

(a) Coverage provisions, benefits, and any exclusions by category of service, provider or physician, and if applicable, by specific service;

(b) Any and all prior authorization or other review requirements including preauthorization review, concurrent review, post-service review, post-payment review and any procedures that may lead the patient to be denied coverage for or not be provided a particular service;

(c) Financial arrangements or contractual provision with hospitals, review companies, physicians or any other provider of health care services that would limit the services offered, restrict referral or treatment options, or negatively affect the physician's fiduciary responsibility to patients, including but not limited to financial incentive not to provide medical or other services;

(d) Explanation of how plan limitations impact enrollees, including information on enrollee financial responsibility for payment for coinsurance or other noncovered or out-of-plan services;

(e) Loss ratios; and

(f) Enrollee satisfaction statistics, including percent reenrollment, reasons for leaving plan;

(2) Plans shall demonstrate that they have adequate access to physicians and other providers, so that all covered health care services will be provided in a timely fashion. This requirement cannot be waived and shall be met in all areas where the plan has enrollees, including rural areas;

(3) Plans shall meet financial reserve requirements that are established to assure proper payment for covered services provided. An indemnity fund shall be established to provide for plan failures even when a plan has met the reserve requirements;

(4) All plans shall be required to establish a mechanism, with defined rights, under which physicians participating in the plan provide input into the plan's medical policy, including coverage of new technology and procedures, utilization review criteria and procedures, quality and credentialing criteria, and medical management procedures;

Continued on page 26

Patient Fairness Act Continued...

(5) All plans shall be required to credential physicians within the plan, and shall allow all physicians within the plan's geographic service area to apply for such credentials. At least once per year, plans shall notify physicians of the opportunity to apply for credentials. Such a credentialing process shall begin upon application of a physician to the plan for inclusion. Each application shall be reviewed by a credentialing committee with appropriate representation of the applicant's medical specialty. Credentialing shall be based on objective standards of quality with input from physicians credentialed in the plan and such standards shall be available to applicants and enrollees. When economic considerations are part of the decision, objective criteria shall be used and shall be available to applicants, participating physicians and enrollees. Any economic profiling of physicians shall be adjusted to recognize case mix, severity of illness, age of patients and other features of a physician's practice that may account for higher than or lower than expected costs. Profiles shall be made available to those so profiled. When graduate medical education is a consideration in credentialing, equal recognition shall be given to training programs accredited by the Accrediting Council on Graduate Medical Education and by the American Osteopathic Association. Plans shall be prohibited from discriminating against enrollees with expensive medical conditions by excluding practitioners with practices containing a substantial number of such patients. All decisions shall be made on the record, and the applicant shall be provided with all reasons used if the application is denied or the contract not renewed. Plans shall not be allowed to include clauses in physician or other provider contracts that allow for the plan to terminate the contract without cause.

5. There shall be a due process appeal from all adverse decisions. The director shall establish due process appeal mechanism based on the appeals process set forth in the Health Care Quality Improvement Act of 1986, 42 U.S.C. 11101 to 11152.

6. The same standards and procedures used for an application for credentials shall also be used in those cases where the plan seeks to reduce or withdraw such credentials. Prior to initiation of a proceeding leading to termination of a contract for cause, the physician shall be provided notice, an opportunity for discussion, and an opportunity to enter into and complete a corrective action plan, except in cases where there is imminent harm to patient health or an action by a state medical board or other government agency that effectively impairs the physician's ability to practice medicine within the jurisdiction.

7. Procedures shall be established to ensure that all applicable federal and state laws designed to protect the confidentiality of provider and individual medical records are followed.

8. Standards shall first be established under this section by not later than twelve months after the date of the effective date of this section. In developing standards under this section, the director shall:

(1) Review standards in use by national private accreditation organizations and the National Association of Insurance Commissioners;

(2) Recognize, to the extent appropriate, differences in the organizational structure and operation of managed care plans; and

(3) Establish procedures for the timely consideration of applications for certification by managed care plans.

9. The director shall periodically review the standards established under this section, and may revise the standards from time to time to assure that such standards continue to reflect appropriate policies and practices for the cost-effective and medically appropriate use of services within managed care plans.

Intractable Pain Act

MSMA, with the help of the Board of Healing Arts, has drafted legislation that will give physicians greater latitude to prescribe controlled substances for the treatment of intractable pain. Under current law the Board is obligated to investigate physicians whose prescribing patterns indicate a heavier than normal usage of controlled substances to relieve pain. Our bill, called the "Intractable Pain Act," would prohibit the Board from disciplining a physician solely for prescribing, administering, or dispensing controlled substances for the treatment of intractable pain. The bill, which is reprinted here in its entirety, is sponsored by Senator Mike Lybyer of Huggins and Representative Jerry McBride of Rolla.

L. R. No. 52-1

ROUGH DRAFT NO. 1
AN ACT

To amend chapter 334, RSMo, relating to physicians
by adding thereto two new sections relating to
the treatment of intractable pain, with penalty provisions.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF MISSOURI, AS FOLLOWS:

Section A. Chapter 334, RSMo, is amended by adding thereto two new sections, to be known as sections 334.105 and 334.106, to read as follows:

334.105. Sections 334.105 and 334.106 shall be known and may be cited as the "Intractable Pain Treatment Act".

2. For the purposes of sections 334.105 and 334.106, the following terms mean:

(1) "Board", the state board of registration for the healing arts;

(2) "Intractable pain", a pain state in which the cause of pain cannot be removed or otherwise treated and which in the generally accepted course of medical practice no relief or cure of the cause of pain is possible or none has been found after reasonable efforts that have been documented in the physician's medical records;

(3) "Physician", physicians and surgeons licensed pursuant to this chapter by the board;

(4) "Therapeutic purpose", the use of controlled substances in acceptable doses with appropriate indication for the treatment of pain. Any other use is nontherapeutic.

334.106. 1. Notwithstanding any other provision of law to the contrary, a physician may prescribe, administer or dispense controlled substances for a therapeutic purpose to a person diagnosed and treated by a physician for a condition resulting in intractable pain, if such diagnosis and treatment has been documented in the physician's medical records. No physician shall be subject to disciplinary action by the board solely for prescribing, administering or dispensing controlled substances when prescribed, administered or dispensed for a therapeutic condition resulting in intractable pain, if such diagnosis and treatment has been documented in the physician's medical records.

Continued on page 28

Intractable Pain Act continued...

2. The provisions of subsection 1 of this section shall not apply to those persons being treated by a physician for chemical dependency because of their use of controlled substances not related to the therapeutic purposes of treatment of intractable pain.

3. The provisions of subsection 1 of this section provide no authority to a physician to prescribe, administer or dispense controlled substances to a person the physician knows or should know to be using controlled substances which use is not related to the therapeutic purpose.

4. Drug dependency or the possibility of drug dependency in and of itself is not a reason to withhold or prohibit the prescribing, administering or dispensing of controlled substances for the therapeutic purpose of treatment or a person for intractable pain, nor shall dependency relating solely to such prescribing, administering or dispensing subject a physician to disciplinary action by the board.

5. Nothing in this section shall deny the right of the board to deny, revoke or suspend the license of any physician or otherwise discipline any physician who:

Section 2. Nothing in sections 1 to 3 of this act shall be construed as prohibiting the following:

(1) Prescribes, administers or dispenses a controlled substance that is nontherapeutic in nature or nontherapeutic in the manner in which it is prescribed, administered or dispensed, or fails to keep complete and accurate on-going records of the diagnosis and treatment plan;

(2) Fails to keep complete and accurate records of controlled substances received, prescribed, dispensed and administered, and disposal of drugs listed in the Missouri comprehensive drug control act contained in chapter 195, RSMo, or of controlled substances scheduled in the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970, 21 USC 801, et seq. A physician shall keep records of controlled substances received, prescribed, dispensed and administered, and disposal of these drugs shall include the date of receipt of the drugs, the sale or disposal of the drugs by the physician, the name and address of the person receiving the drugs, and the reason for the disposal or the dispensing of the drugs to the person;

(3) Writes false or fictitious prescriptions for controlled substances as defined in the Missouri comprehensive drug control act chapter 195, RSMo, or for controlled substances scheduled in the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970, 21 USC 801, et seq.; or

(4) Prescribes or administers, or dispenses in a manner which is inconsistent with provisions of the Missouri drug control act contained in chapter 195, RSMo, or the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970, 21 USC 801, et seq.

$95/$40

PER NIGHT DINING CREDIT

Starting December 11th, warm up to winter at The Westin Crown Center with a getaway that gives you more. Now, for just $95 per night, you can enjoy a luxurious guest room *plus* a $40 dining credit for world famous Trader Vic's, Benton's Steak House or the Brasserie European Cafe. Top it off with shopping, theater and all the sights of Crown Center directly connected to the hotel. The $95/$40 getaway. Your winter escape awaits! For reservations call toll-free (800) 228-3000 or call direct (816) 474-4400.

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Valid Dec. 11 – Feb. 28, 1995. Not valid 12/31/94, 1/1/95, for groups or with other offers. Double occupancy. Based upon space availability. Valid any day of the week for MO & KS residents. Valid weekends only for NE & IA residents.

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Major Provisions of MSMA'S Proposed Insurance Market Reform Bill

Due to the length of the Insurance Market Reform Bill, the compelete bill is not printed. The following are highlights of this legislation.

INDIVIDUAL POLICIES

The Small Employer Health Insurance Availability Act was enacted several years ago to regulate insurers who provide coverage for small businesses (those with no more than 25 employees). MSMA proposes to make individual policies a part of this act and to add a number of new regulatory standards. Among those standards are:

MODIFIED COMMUNITY RATING

MSMA proposes that all new and renewal premium rates be based on a community rate. All individuals and small businesses (any business with more than three and less than 500 employees) within a given community will pay the same premium for the same health benefit plan, except that the rate can be adjusted according to the policy holder's age and family size. Any adjustment made for age cannot vary by more than 20% above or below the community rate. For rating purposes, there will be five market service areas or "communities": St. Louis, Kansas City, and three areas of equal population drawn from the remainder of the state.

STANDARD BENEFITS PACKAGES

The Governor will appoint a 14-member "Health Benefit Plan Committee" (containing at least two physicians) which shall establish five standard benefits packages. All insurers will be required to offer at least one of these plans, and the minimum plan that can be offered must contain all of the HMO benefits provided in the Missouri plan for state employees (a fairly generous plan). One of the standard plans must offer a point of service option which cannot require an enrollee copayment of greater than 20% of the amount which would have been paid for an in-network service if the enrollee seeks out-of-network services.

The bill calls on the Departments of Insurance and Revenue to develop a plan which permits health care services to be purchased using a medical savings account or other such plan with tax incentives.

OPEN ENROLLMENT

In each "community" there shall be a common annual thirty-day open enrollment period during which each insurer must actively market its plans to all individuals and small employers within its market service area. Open enrollment need not be offered to individuals who have not resided in this state for at least one year.

PRE-EXISTING CONDITION EXCLUSIONS

No insurer may impose upon an enrollee a limitation or exclusion of benefits relating to treatment of a pre-existing condition. To prevent border crossing and to dissuade individuals from waiting until they are ill to purchase insurance, an insurer may impose exclusions or limitations based on pre-existing conditions for up to six months on individuals who are late enrollees.

PORTABILITY

As long as a policy holder pays the premiums, he or she always will have coverage. A health benefits policy can only be terminated for nonpayment of premiums or fraud or misrepresentation.

RISK ADJUSTMENT

The Missouri Small Employer Health Reinsurance Board, which exists now to ensure the solvency of insurers offering policies to small businesses, will be charged with establishing efficiency and risk management standards for all health insurers. The Board will reinsure insurers who take on a disproportionate share of high risk enrollees, and subsidize any insurer whose average cost of insuring individuals exceeds the regional average cost by greater than 20%. This encourages insurers to compete in market areas with greater than average risk.

Legislative Issues

Non-Physician Providers Seeking More Practice Privileges

Lay Midwifery

The legalization of the practice of lay midwifery is an issue that has been around for several years and gets closer to passage each year. The lay midwife would be licensed by the state to deliver babies even though the education and training requirements are virtually non-existent. MSMA again will offer an alternative that would allow nurse practitioners to deliver babies under the standing orders and protocols of a physician.

Optometrists

Last session MSMA defeated a bill that would have expanded the scope of practice of optometrists. It would have allowed them to perform almost any procedure, including laser surgery, that the Board of Optometry deemed reasonable. Representatives from MSMA, the Missouri Ophthalmological Society, and the Missouri Optometric Association have been meeting during the interim to reach a compromise. The optometrists are well organized politically and will be very active in the Capitol this year.

Chiropractors

MSMA defeated a proposal last session that would have allowed chiropractors to perform any services "as taught in any accredited chiropractic college." It also would have granted them hospital admitting privileges. The chiropractors have been politically active and are among the most generous of contributors to campaigns.They will be back.

Podiatrists

The podiatrists also attempted to expand the scope of their practice last session. MSMA was able to defeat a bill that would have defined the term "human foot" - to which their practice is limited - to include "the ankle and the soft tissue which insert into the foot." Representatives from MSMA, the Missouri State Orthopaedic Association, and the Missouri Podiatric Medical Association are meeting during the interim to see if a compromise can be forged.

Acupuncturists

The acupuncturists will again push legislation to grant them licensure in Missouri. Last session their campaign included free acupuncture therapy for legislators and Capitol staffers. It created insterest and succeeded in generating widespread sympathy. It will be difficult to stop this year.

Medical Practice Issues

Intractable Pain Act, *see pages 27-28*

MSMA and the Board of Healing Arts will pursue changes in law to allow physicians greater latitude in prescribing controlled substances for the treatment of intractable pain. Under current law the Board feels compelled to question the physician when prescribing patterns indicate heavier then normal doses of pain-relieving medications. The proposed change should ease the pain and suffering of many patients and bring relief to the prescribing physician.

Disciplinary Actions

Last session an attempt was made to prohibit a disciplinary proceeding against any licensed professional unless formal charges are filed within five years of the alleged violation. Some progress was being made for the proposal until the Attorney General and all of the licensing boards expressed opposition. MSMA is working with the opponenets to see if agreeable language can be developed.

Workers' Compensation

Several workers' compensation reform measures will be offered next year. The MSMA will be monitoring them to ensure that any new language is acceptable. Possible proposals include a fee schedule (Medicare's fee schedule) for physicians' services, and language that would allow the injured worker to choose a chiropractor for post-injury care.

DOH Attracting Primary Care Physicians

The Department of Health is requesting $2 million in additional funding to better attract and retain primary care providers in Missouri's underserved areas. MSMA will actively support the Department in this endeavor.

Safety Issues

Bicycle Helmets

Despite MSMA's strong support, a bill to require all bicyclists to wear approved safety helmets was defeated last session. The bill will be re-introduced next year.

Seat Belts in Pick-up Trucks

Current law exempts pick-up trucks from the state's seatbelt law. An MSMA-supported measure that would have mandated the use of seatbelts in all pick-ups except those used on farms was defeated last session.

Boating Safety

Last year MSMA supported a bill that would have strengthend our boating safety laws, prohibited anyone under the age of 12 years from operating a motorboat or jet-ski without an onboard supervising adult; imposed a 30-mph speed limit for all watercraft operating at night, prohibited the use of jet-skis after dark, and required all jet-ski operators to wear a life-jacket. The came close to passage, but fell short as time ran out. It will be re-introduced next year.

Ban Firework Sales

MSMA will again pursue a bill to ban the sale, use, storage, and possession of bottle rocket fireworks in Missouri. This proposal, sponsored by Missouri's Ophthalmologists, failed to gain passage last session.

Strengthen DWI Laws

Last session MSMA supported several bills that would have strengthend Missouri's DWI laws. Though none of these measures passed, they will be back and MSMA will continue to push for their passage. MoMed

Get Involved, Become a Key Contact

Now that you have reviewed some of the bills pending in the 1995 General Assembly, you no doubt realize the critical nature of these proposals. More than ever, we need you to get involved in the political process and make sure Missouri legislators know where you stand on these medical issues.

That is why we have developed the MSMA Key Contact Program. Our network of physician Key Contacts receives up-to-the-minute briefings every week from MSMA lobbyists. When issues reach critical points, you are alerted to contact your legislators. This direct approach WORKS! Your lawmakers pay attention when you comment on an issue.

To sign up, simply complete and return the form below to the MSMA Office, 113 Madison Street, PO Box 1028, Jefferson City, MO 65102; Fax to 314=636-8552.

Become a Key Contact Today! We need you more than ever!

My state representative is: ______________________

My state senator is: ______________________

Name: ______________________

Address: ______________________

Phone: ______________________

Legislation & MSMA Policies Start with You

The process of creating legislation or policy supported by the Missouri State Medical Association begins with the ideas and needs of our members.

The first step is stating those needs in the form of a resolution. Resolutions may be submitted by individuals, component medical societies, or groups of individual physicians.

To have a resolution be included in the delegates' handbooks for the MSMA Annual Meeting to be held March 23-26, 1995, at the Adam's Mark Hotel in St. Louis, the resolution must be submitted by **February 6, 1995**.

Submit resolutions to:

MSMA
113 Madison
P.O. Box 1028
Jefferson City, MO 65102;
or fax to 314=636-8552

Contacting Your Legislators

When considering various legislation proposals, lawmakers want to know the views of their constituents. They are always impressed when a physician takes the time away from a busy schedule to call upon them.

No one knows more about health care than physicians. Legislators want to know your opinion, so tell them your thoughts.

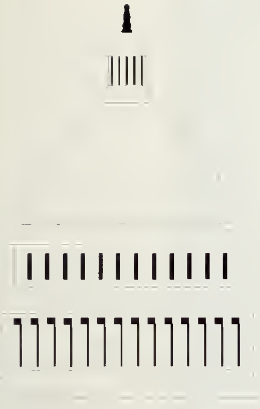
Before you contact legislators let MSMA lobbyists brief you on the status of legislation. Your visit will be more effective with complete knowledge of the status of particular bills.

You may want to visit your legislator in Jefferson City. Make an appointment to meet with them, or perhaps offer to take them to lunch or dinner.

Their time is often limited, so let them know if you want to discuss a complicated subject matter that would take more time than a brief visit. Be sure to thank them for their time.

Stay in touch with your legislators. Let them know your interest is sincere and that they can contact you if they need more information on a medical issue.

Alliance Message



Alliance Day at the Legislature

February 20 & 21, 1995

The Alliance Day at the Legislature is an opportunity for physicians and their spouses to discuss issues with their elected officials. This day is well established at the Capitol and many legislators attend.

February 20

2:00 pm	**Deliver invitations to legislators.**
4:00 pm	**Alliance Board Meeting.**
6:30 pm	**Cocktails & Dinner, *Capitol Plaza Hotel.*** ***MSMA lobbyist will discuss current legislative issues.***

February 21

7:30 am	**Meet at the Capitol Building, *Rooms 3 & 4, lower level.***
8:00 am	**Legislators will begin to visit.** ***Coffee & rolls provided. You bring the conversation.***
10:00 am	**Observe sessions in the House & Senate.**

Alliance Day at the Legislature event fee: $22.50

Name____

Address______________________________________

City______________________________ Zip__________

County Society/Alliance____________________________

List names of legislators you will personally invite:

____

____

Please complete form and send with check for $22.50 payable to MSMAA, to Becky Moore, MSMAA Vice President - Legislation, Rt. 4, Box 27, Joplin, MO 64804, 417/623-1195.

Spouses are not only welcome to join us both days - they are encouraged.

A block of rooms has been reserved for MSMAA members. To reserve hotel accomodations at the Capitol Plaza Hotel, call 314/635-1234 by February 1, 1995.

Legislative Affairs Committee

David O. Barbe, MD, *Mountain Grove*
Steven E. Buie, MD, *Lee's Summit*
Mrs. Nona Chapman, *Cape Girardeau*
William Crowley, MD, *Columbia*
Frederick W. Hahn, MD, *Independence*
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Daniel O'Sullivan, MD, *St. Louis*
Charles Porter, MD, *Kansas City*
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Mrs. Jean Wankum, *Jefferson City*
David Wilkinson, MD, *St. Louis*
Carol F. Williams, MD, *St. Louis*
* *chairman*

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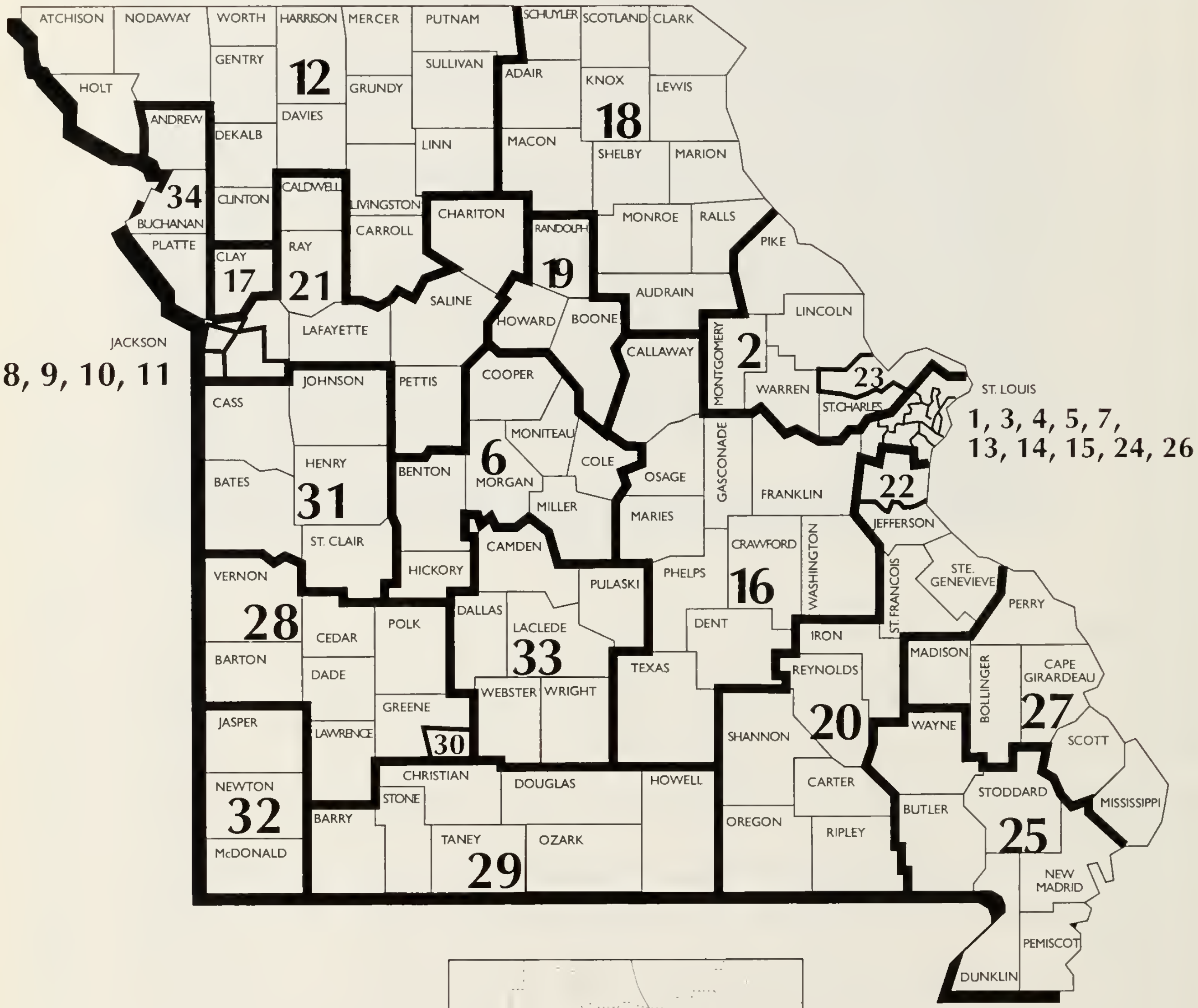
Missouri Senate - 88th General Assembly First Regular Session

SENATOR	DISTRICT	ADDRESS & PHONE NO.		ROOM NO.
Banks, J. B. (Jet)	**5**	1442a North Grand, St. Louis, MO 63106; 314/361-3800	**751-4650**	**319**
Bentley, Roseann	**30**	1500 E. Meadowmere, Springfield, MO 65804; 417/865-5160	**751-4145**	**421**
Caskey, Harold L.	**31**	P.O. Box 45, Butler, MO 64730; 816/679-4162	**751-4116**	**320**
Clay Jr., William L.	**4**	6136 Washington Ave., St. Louis, MO 63112; 314/535-3212	**751-2229**	**429**
Curls, Phil B.	**9**	3832 Myrtle, Kansas City, MO 64128; 816/241-1200	**751-2400**	**221**
DePasco, Ronnie	**11**	925 Cleveland, Kansas City, MO 64127; 816/231-2515	**751-3074**	**219**
Ehlmann, Steve	**23**	820 S. Main St., Suite 302, St. Charles, MO 63301; 314/949-2323	**751-8635**	**427**
Flotron, Frances E.	**7**	13043 Olive Street Rd., St. Louis, MO 63141; 314/434-2115	**751-2371**	**331**
Goode, Wayne	**13**	7717 Natural Bridge Rd., Normandy, MO 63121; 314/385-9010	**751-2420**	**334**
Graves, Sam	**12**	Rt. 2, Box 5, Tarkio, MO 64491; 816/736-4751	**751-3271**	**225**
House, Ted	**2**	3077 Winding River Dr., St. Charles, MO 63303; 314/946-0077	**751-8437**	**227**
Howard, J. T.	**25**	P.O. Box 279, Dexter, MO 63841; 314/624-8778	**751-3301**	**428A**
Johnson, Sidney	**34**	9970 Johnson Rd., Agency, MO 64401; 816/253-9248	**751-3750**	**332**
Kenney, Bill	**8**	2410 SW Hook Rd., Lee's Summit, MO 64082; 816/524-7272	**751-7050**	**328**
Kinder, Peter	**27**	635 NW End Blvd., Cape Girardeau, MO 63701; 314/335-6611	**751-2455**	**431**
Klarich, David	**26**	34 Roland Ave., Ballwin, MO 63021; 314/230-8116	**751-1073**	**226**
Lybyer, Mike	**16**	HCR 9, Box 200, Huggins, MO 65484; 417/967-3227	**751-2601**	**333**
Mathewson, James L.	**21**	142 South Limit, Sedalia, MO 65301-3655; 816/826-7815	**751-4771**	**326**
Maxwell, Joe	**18**	#5 Terrace Circle, Mexico, MO 65262	**751-4200**	**329**
McKenna, William P.	**22**	6969 Dippel Lane, Barnhart, MO 63012; 314/464-5684	**751-2504**	**321**
Melton, Emory	**29**	P.O. Box 488, Cassville, MO 65625; 417/847-4144	**751-2937**	**420A**
Moseley, Joe	**19**	3209 Wood Dale, Columbia, MO 65203; 314/874-9555	**751-2131**	**323**
Mueller, Walt	**15**	12325 Manchester Rd., St. Louis, MO 63131; 314/966-2526	**751-3838**	**330**
Quick, Edward E.	**17**	2212 NE 38th, Kansas City, MO 64116; 816/454-1078	**751-4524**	**331A**
Rohrbach, Larry	**6**	HCR 60, Box 12, California, MO 65018; 314/796-3708	**751-2780**	**434**
Russell, John T.	**33**	P.O. Box 93, Lebanon, MO 65536; 417/532-6050	**751-4166**	**419**
Schneider, John D.	**14**	3520 Tremont Dr., Florrisant, MO 63033; 314/421-2762	**751-4106**	**422**
Scott, John E.	**3**	3761 Bates, St. Louis, MO 63116; 314/481-6864	**751-3644**	**416**
Sims, Betty	**24**	18 Ladue Manor, St. Louis, MO 63124; 314/994-0793	**751-7147**	**425**
Singleton, Marvin	**32**	3401 McIntosh Circle, Joplin, MO 64804; 417/781-2040	**751-2306**	**426**
Staples, Danny	**20**	HCR 3, Box 18, Eminence, MO 65466; 314/756-5592	**751-3534**	**418**
Treppler, Irene	**1**	4681 Fuchs Rd., Mattese, MO 65128; 314/487-1420	**751-2887**	**433**
Westfall, Morris	**28**	RR 2, Box 180 HWAY, Halfway, MO 65663; 417/445-2220	**751-7514**	**220**
Wiggins, Harry	**10**	7817 Terrace, Kansas City, MO 64114; 816/444-5718	**751-2788**	**423**

Missouri Senate Districts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OSAGE
GASCONADE
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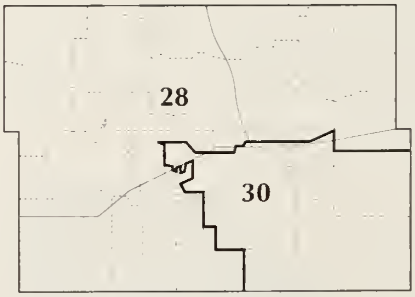
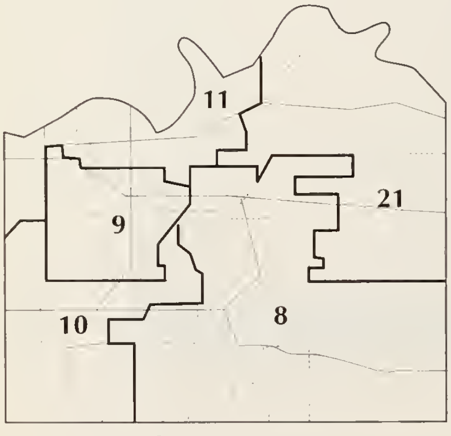


Greene County



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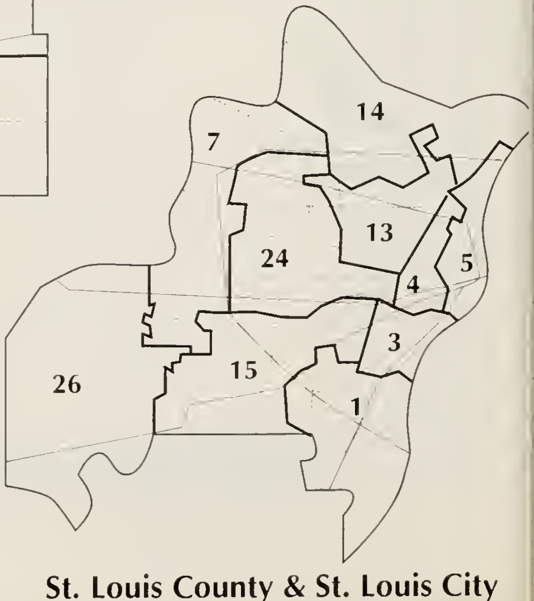
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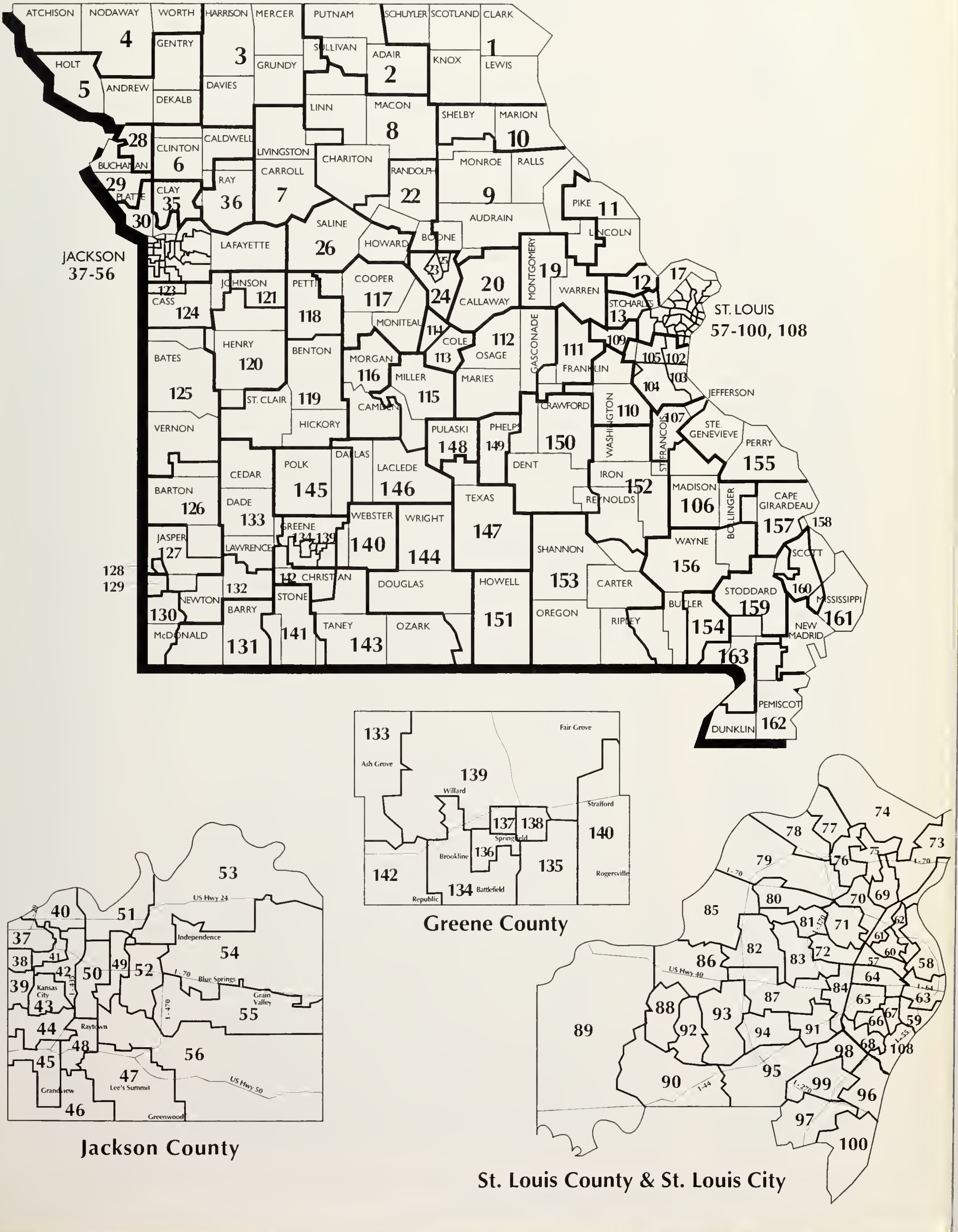
St. Louis County & St. Louis City

Missouri House Districts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MONTGOMERY
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PETTIS
COOPER
117
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CALLAWAY
WARREN
CASS
124
118
MONITEAU
ST.CHARLES
13
ST. LOUIS
57-100, 108
114
COLE
112
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HENRY
120
BENTON
113
OSAGE
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BATES
MORGAN
116
MILLER
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MARIES
FRANKLIN
104
103
125
ST. CLAIR
119
CAMDEN
CRAWFORD
110
JEFFERSON
VERNON
HICKORY
PULASKI
148
PHELPS
149
150
WASHINGTON
ST.FRANCOIS
107
STE. GENEVIEVE
PERRY
155
CEDAR
POLK
145
DALLAS
LACLEDE
146
DENT
IRON
152
BARTON
126
DADE
133
TEXAS
REYNOLDS
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106
BOLLINGER
CAPE GIRARDEAU
157
158
JASPER
127
GREENE
134-139
WEBSTER
140
WRIGHT
144
147
SHANNON
WAYNE
156
SCOTT
LAWRENCE
128
129
132
142
CHRISTIAN
DOUGLAS
HOWELL
153
CARTER
STODDARD
159
160
MISSISSIPPI
NEWTON
STONE
BUTLER
161
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BARRY
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TANEY
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154
NEW MADRID
McDONALD
131
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133
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139
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Jackson County

Greene County

St. Louis County & St. Louis City

Missouri House of Representatives - 88th General Assembly
First Regular Session

REPRESENTATIVES	DISTRICT	ADDRESS & PHONE NO.		ROOM
Akin, W. Todd	86	305 Conway Hill Rd., St. Louis, MO 63141; 314/542-2116	751-1186	115E
Alter, Bill	90	1800 Gravois, High Ridge, MO 63049; 314/677-8191	751-2732	135BC
Auer, Ron	59	3120 S. Compton, St. Louis, MO 63118; 314/453-1894	751-4567	411-2
Backer, Gracia Y.	20	2859 Rt. TT, New Bloomfield, MO 65063; 314/295-6190	751-2070	303A
Ballard, Charles	140	Rt. 4, Box 3450, Marshfield, MO 65706; 417/859-6454	751-9809	135BB
Barnes, James	49	11301 E. 67th St., Raytown, MO 64133; 816/795-8377	751-2516	301
Barnett, Rex	4	708 West Lincoln, Maryville, MO 64468; 816/582-8906	751-9465	116A1
Bartelsmeyer, Linda	132	1606 S. Adams Ave., Aurora, MO 65605; 417/678-5822	751-9806	105I
Bennett, Jon	15	151 Pralle Ln., St. Charles, MO 63303; 314/440-2300	751-9627	109E
Bland, Mary	43	6135 Indiana, Kansas City, MO 64130; 816/483-8683	751-2770	314
Boatright, Matt	118	RR 2, Box 273A, Sedalia, MO 65301; 816/826-1880	751-9774	105H
Bonner, Dennis	51	947 S. Washington, Independence, MO 64050; 816/842-0707	751-5701	409A
Boucher, Bill	48	11320 Sunnyslope Dr., Kansas City, MO 64134; 816/966-8576	751-7335	304B
Bray, Joan	84	7120 Washington Ave., St. Louis, MO 63130; 314/863-7120	751-2514	412A
Broach, David W.	102	2007 Ronnies Dr., Arnold, MO 63010; 314/282-9986	751-3264	105G
Brown, Harriet Tatum	13	P.O. Box 840, Wentzville, MO 63385; 314/327-5204	751-4964	115H
Burton, Gary L.	128	1829 E. 20th, Joplin, MO 64804; 417/623-6400	751-7082	201G
Canuteson, Greg	34	623 West Kansas, Liberty, MO 64068; 816/781-8560	751-4069	410B
Carter, Paula J.	61	5936 Summit, St. Louis, MO 63147; 314/385-4383	751-6500	235
Champion, Norma	134	3609 S. Broadway, Springfield, MO 65807; 417/865-2815	751-2583	105F
Childers, Doyle	141	P.O. Box 127, Reeds Springs, MO 65737; 417/272-8281	751-2058	102BB
Chrismer, Rich	16	25 Barkwood Trails, St. Peters, MO 63376; 314/441-6219	751-2949	101I
Cierpiot, Connie J.	52	15403 E. 44th, Independence, MO 64055; 816/373-8935	751-9759	109D
Clayton, Robert	10	P.O. Box 1032, Hannibal, MO 63401; 314/221-7333	751-9614	130DB
Cooper, Bonnie Sue	32	413 NW 58th St., Kansas City, MO 64118; 816/453-4419	751-2071	203B
Copeland, Fred E.	161	30 Greenbriar Dr., New Madrid, MO 63869; 314/748-5500	751-4560	302A
Crum, Joe Clay	112	HCR 71, Vienna, MO 65582; 314/442-3761	751-9769	134
Crump, Wayne F.	152	606 Pine St., Potosi, MO 63664; 314/438-3418	751-2101	310
Daniel, Lloyd	42	4437 Benton Blvd., Kansas City, MO 64130; 816/292-2735	751-9758	300A
Daniels, Fletcher	41	3537 Askew, Kansas City, MO 64128; 816/924-1513	751-3158	303B
Davis, Dorathea	63	2017 Menard, St. Louis, MO 63104; 314/773-4770	751-2606	305B
Days, Rita D.	71	3083 Bellerive Dr., St. Louis, MO 63121; 314/385-9598	751-4468	313B
Donovan, Laurie B.	74	7 Ipswich Ct., Florissant, MO 63033; 314/741-1443	751-2135	200B
Dougherty, Patrick	67	4031 Parker Ave., MO 63116; 314/772-1948	751-3599	313C
Edwards, Marilyn A.	105	8375 Byrnesville Rd., House Springs, MO 63051; 314/671-2232	751-4343	1164
Elliott, T. Mark	127	2 South Main, Webb City, MO 64870; 417/673-8464	751-5458	135AA
Enz, Catherine S.	99	10018 St. Simon Ct., St. Louis, MO 63123; 314/435-0220	751-9768	109I
Evans, Brent	92	4 Westbrooke Terr Ct., Manchester, MO 63021; 314/878-7887	751-9765	105J
Farmer, Nancy	64	5843 Waterman, St. Louis, MO 63112; 314/721-3083	751-1400	407A
Farnen, Theodore W.	21	1626 University Ave., Apt A, Columbia, MO 65201; 314/443-5501	751-9681	236B
Fiebelman, Ken	150	1202 Gertrude St., Salem, MO 65560; 314/729-5707	751-2108	304A
Fitzwater, Rodger	36	RR 2, Box 206, Norborne, MO 64668; 816/484-3501	751-9757	400CA
Foley, James Michael	81	3274 Adie Rd., St. Ann, MO 63074; 314/426-7675	751-0855	405A
Ford, Louis H.	58	3229 North 20th St., St. Louis, MO 63107; 314/241-1626	751-2383	402B
Foster, Bill I.	156	Rt. 9, Box 252-1, Poplar Bluff., MO 63901; 314/785-1484	751-3859	116-1
Franklin, Richard	53	18005 Cheyenne, Independence, MO 64056 816/796-3088	751-6535	404A
Froelker, James V.	111	7437 Highway H., Gerald, MO 63037; 314/925-4587	751-6668	135BA
Garnett, Jess	151	P.O. Box 801, West Plains, MO 65775; 417/867-5651	751-7017	114B
Gaskill, Sam	131	HCR 79, Box 345, Washburn, MO 65772; 417/435-2304	751-9801	101G
Gaw, Steve	22	P.O. Box 314, Moberly, MO 65270; 816/263-9000	751-2749	110A
Gibbons, Michael R.	94	651 Pearl Ave., Kirkwood, MO 63122; 314/821-4616	751-2853	106B

. . . .

Goward, Russell	**60**	5000 Tyus Ct., St. Louis, MO 63115; 314/381-6808	**751-2704**	**205**
Graham, Jim	**106**	Rt. 1, Box 145, Fredericktown, MO 63645; 314/783-7707	**751-3455**	**105B**
Gratz, William (Bill)	**113**	2315 Rt. M., Jefferson City, MO 65101; 314/635-4168	**751-0665**	**206C**
Green, Timothy P.	**73**	617 Science Hill, St. Louis, MO 63137; 314/869-9376	**751-6845**	**408A**
Griesheimer, John E.	**109**	33 Oxford Dr., Washington, MO 63090; 314/239-2523	**751-3678**	**106A**
Griffin, Bob F.	**6**	204 Benjamin Dr., Cameron, MO 64429; 816/632-0011	**751-2700**	**308**
Gross, Charles	**18**	3018 Westborough Ct., St. Charles, MO 63301; 314/947-7893	**751-1141**	**201D**
Gunn, Russell	**70**	6723 Maryellen, Northwoods, MO 63121; 314/389-7349	**751-4726**	**135**
Hagan-Harrell, Mary	**75**	100 Florwood Ct., Ferguson, MO 63135; 314/521-5555	**751-5836**	**317D**
Hall, Glenn	**56**	10506 S. Perdue Rd., Grain Valley, MO 64029; 816/524-8111	**751-1464**	**203C**
Hand, Raymond W. (Bill)	**87**	545 Gascony Way, Warson Woods, MO 63122; 314/821-2040	**751-8510**	**109B**
Harlan, Tim	**23**	511 S. Glenwood Ave., Columbia, MO 65203; 314/874-2402	**751-9753**	**400CC**
Hartzler, Ed	**123**	303 Manor Ct., Belton, MO 64012; 816/331-0090	**751-2175**	**101F**
Hartzler, Vicky	**124**	22804 E. 299th St., Harrisonville, MO 64701; 816/884-5297	**751-9780**	**109F**
Heckemeyer, Joe	**160**	510 N. Main, Sikeston, MO 63801; 314/471-0550	**751-9829**	**415B**
Hegeman, Daniel J.	**5**	RR 1, Box 408, Cosby, MO 64436; 816/662-2645	**751-0246**	**103BC**
Hendrickson, Carl	**97**	4661 Markton Dr., St. Louis, MO 63128; 314/554-3183	**751-9766**	**101K**
Hickey, John	**80**	4458 Boswell, Woodson Terrace, MO 63134; 314/428-3683	**751-4670**	**317C**
Hohulin, Bubs	**126**	Rt. 4, Box 925, Lamar, MO 64759; 800/878-7126	**751-2165**	**135AB**
Hoppe, Thomas	**46**	12316 Charlotte, Kansas City, MO 64146; 816/561-2065	**751-9469**	**403A**
Hosmer, Craig	**138**	657 S. Weller, Springfield, MO 65802; 417/869-0581	**751-9474**	**207A**
Howerton, Jim	**120**	535 NW 1250, Chilhowee, MO 64733; 816/678-4501	**751-1484**	**105E**
Jacob, Kenneth B.	**25**	4810 St. Charles Rd., Columbia, MO 65201; 314/874-7777	**751-2419**	**112**
Kasten, Mary C.	**158**	1209 Sailor Circle, Cape Girardeau, MO 63701; 314/334-3111	**751-2459**	**101C**
Kauffman, Sandy	**45**	620 E. 90th Terr, Kansas City, MO 64131; 816/333-3826	**751-5543**	**115A**
Keeven, Ronald P.	**78**	1110 Scoville, Florrisant, MO 63031; 314/831-9596	**751-1410**	**116A2**
Kelley, Pat	**47**	627 SW Lemans, Lee's Summit, MO 64082; 816/254-5116	**751-1456**	**200BC**
Kelly, Glenda	**27**	3415 N. 3rd St., St. Joseph, MO 64505; 816/233-2614	**751-9755**	**130DC**
Kissell, Don	**17**	408 Sutters Mill, St. Peters, MO 63376; 314/997-7878	**751-9628**	**317B**
Klumb, Jason O.	**125**	P.O. Box 341, Butler, MO 64730; 816/679-5787	**751-2033**	**235BA**
Koller, Don	**153**	P.O. Box 135, Summersville, MO 65571; 417/932-4064	**751-2112**	**413A**
Kreider, Jim	**142**	P.O. Box 1980, Nixa, MO 65714; 417/581-8599	**751-2956**	**114A**
Lakin, Scott	**33**	3700 NE 49th Terr, Kansas City, MO 64119; 913/338-2525	**751-6600**	**406B**
Leake, Sam	**9**	RR 2, Box 61A, Laddonia, MO 63352; 314/373-5685	**751-7852**	**404B**
Legan, Kenneth	**145**	RR 2, Box 196, Halfway, MO 65663; 417/445-2241	**751-3819**	**200A**
Levin, David	**82**	11208 Sherwood Oak Ct., St. Louis, MO 63146; 314/432-6502	**751-9762**	**116-3**
Liese, Chris	**85**	1948A Marine Terr Dr., St. Louis, MO 63146; 314/878-4787	**751-1832**	**235BB**
Linton, William C.	**89**	17339 Cougar Trail, Grover, MO 63040; 314/458-0736	**751-1247**	**201B**
Lograsso, Don	**54**	404 Stonewall Drive, Blue Springs, MO 64014; 816/228-7551	**751-1487**	**101H**
Long, Elizabeth L.	**146**	Rt. 2, Box 39, Lebanon, MO 65536; 417/532-6946	**751-4451**	**101D**
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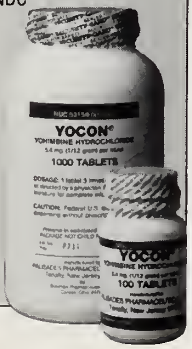

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Stereotactic Surgery in the Management of Intracranial Disorders

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John J. Oro, MD and David F. Jimenez, MD

Fifty-six stereotactic procedures (thirty-eight stereotactic biopsies, 13 stereotactic craniotomies, and 5 implantations of intracranial catheters) were performed on 54 patients at the University of Missouri between 1990 and 1994. In 89.5% of cases a definitive diagnosis was made by stereotactic biopsy with a major complication rate of 2.6%, rates comparable to other published series. Stereotactic craniotomy was associated with no mortality and minimal morbidity. Stereotactic surgery is a safe and effective technique that improves the management of many intracranial disorders.

Although the first stereotactic apparatus for use in animals was described at the turn of the century,[1] the first device for use in humans was developed in 1947,[2] and it was not until the late 1970s that stereotactic surgery found wide clinical application. At that time, the advent of computerized tomography, and its adaptation to stereotaxis, resulted in a surge of indications for stereotactic surgery and established its important role in the management of many brain lesions.

Image-guided stereotaxis is based on the head and brain becoming a part of a three-dimensional Cartesian co-ordinate system in which any intracranial target can be described in space with x, y and z co-ordinates. This target can then be accessed by a probe, biopsy needle, or catheter. Various stereotactic systems have different methods for accessing these co-ordinates. In this report, we describe our experience with the Cosman-Roberts-Wells stereotactic system over the past four years in the management of various brain disorders.

Table 1. Stereotactic Procedures performed from February, 1990 through June 1994

Procedure	Number
Stereotactic biopsy	
supratentorial	33
infratentorial	5
Stereotactic craniotomy	13
Stereotactic placement of intracranial catheter	
VP shunt	3
Ommaya reservoir	1
Posterior fossa cyst	1
	56

PATIENT AND METHODS

Between February, 1990 and June, 1994, 56 stereotactic procedures were performed at the University of Missouri-Columbia on 54 patients (Table 1). There were 32 men and 22 women, whose ages ranged from 21 months to 80 years with a mean age of 47 years.

Instrumentation

The commercially available Cosman-Roberts-Wells (CRW) stereotactic system (Radionics, Burlington, MA) was used and data collected on a Siemens Somatom computerized tomographic (CT) scanner. All patients undergoing biopsy or resection received intravenous contrast medium. Stereotactic data including target and fiducial co-ordinates were measured with the CT scan program, and target co-ordinates in three dimensions were calculated using the Epson computer included with the system.

Operative Procedure

The stereotactic frame was attached to the patient's head after the patient received intravenous sedation and scalp infiltration with local anesthetic. Stereotactic biopsies were done under local anesthesia and intravenous sedation in the operating room. The skull was penetrated with either a twist drill or a burr hole created with a high-speed drill. Biopsies were typically taken with a Nashold side cutting biopsy needle. Immediately after biopsy, CT scanning was repeated to assess for intracranial hematoma. Patients undergoing stereotactic biopsy were allowed to leave the hospital the day following the procedure. Stereotactic craniotomies were performed under general endotracheal anesthesia.

Case 1

A 60-year-old woman presented to our hospital after experiencing slurred speech, diplopia, and dysphagia one month prior to admission. Physical examination revealed left-sided facial hypesthesia and a left abducens nerve palsy. Magnetic resonance imaging (MRI) revealed a cystic mass with ring-enhancing border in the midbrain. A stereotactic biopsy was performed under local anesthesia (Fig. 1), entering the calvarium anterior to the coronal suture in the midpupillary line on the right side. Pathologic diagnosis was metastatic carcinoma. No primary source was identified on further workup. The patient underwent radiation therapy.

Case 2

A 42-year-old left-handed woman presented with a two week history of progressive right-sided weakness. She had been treated recently with antibiotics for a febrile illness. On examination she was noted to have a right hemiparesis. CT scan revealed a round, ring enhancing mass in the left cerebral hemisphere. She was taken to the operating room and underwent stereotactic biopsy and aspiration of a cerebral abscess (Figure 2). Cultures of the purulent material grew alpha hemolytic streptococcus. She was treated with six weeks of antibiotic therapy. The hemiparesis had completely resolved on follow up two months later.

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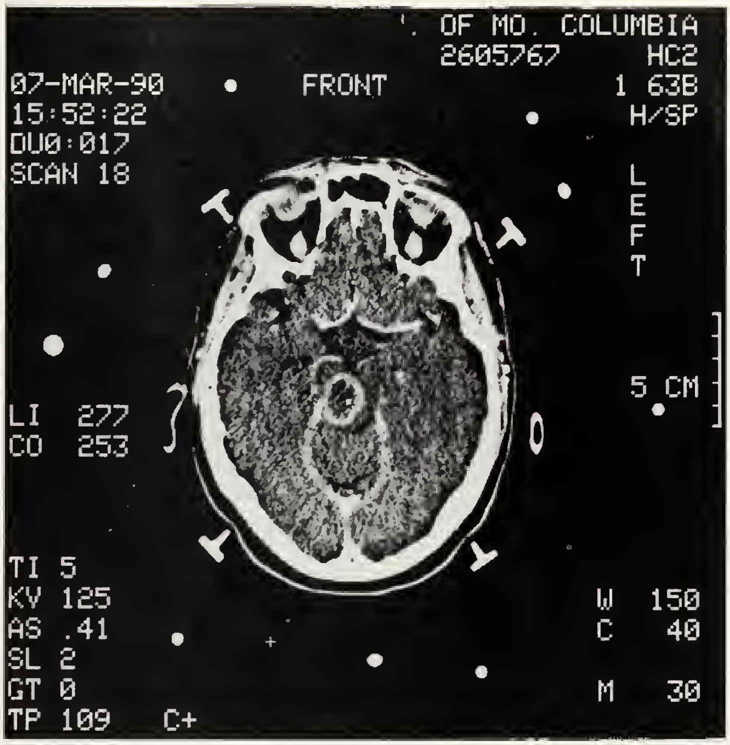
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Fig. 1. Enhanced axial computerized tomographic scan at stereotactic biopsy showing midbrain lesion.

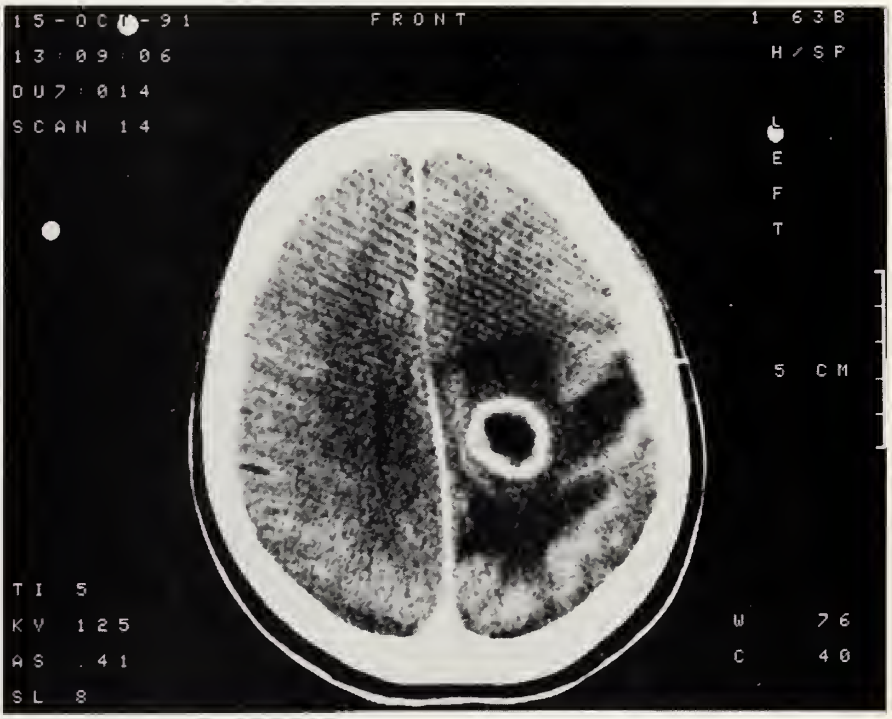
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Fig. 2. Enhanced axial computerized tomographic scan at stereotactic biopsy demonstrating ring enhancing left cerebral lesion.

TABLE 2 - Pathological Diagnosis in 38 Stereotactic Biopsy Cases

Primary brain neoplasms	
glioblastoma multiforme	7
malignant glioma	4
low grade astrocytoma	3
lymphoma	2
Metastatic neoplasms	
adenocarcinoma	7
squamous cell carcinoma	1
lymphoma	1
Abscess	4
Miscellaneous	
gliosis	3
lymphoid infiltrate	1
radiation necrosis	2
infarct	2
adrenoleukodystrophy	1
	38

RESULTS

Procedures

Stereotactic biopsy

Thirty-eight stereotactic biopsies were performed, most (87%) for supratentorial lesions (Table 2). The majority of tissue diagnoses (66%) yielded by stereotactic biopsy were primary and metastatic neoplasms, which had been anticipated pre-operatively. However, in two cases the prebiopsy diagnosis did not correlate with the ultimate tissue diagnosis, and treatment plans were altered. In one case a patient with a suspected low grade glioma was determined through stereotactic biopsy to actually have a cerebral infarction. While in another case, a patient feared to harbor an intracranial metastasis was revealed to have a cerebral abscess which was aspirated. In total, four cerebral abscesses were successfully treated using stereotactic aspiration. In the series of 38 stereotactic biopsies, 34 procedures yielded definitive tissue diagnoses, for a successful tissue diagnosis rate of 89.5%.

Stereotactic craniotomy

Thirteen stereotactic craniotomies were carried out. The tissue diagnoses included: 1 glioblastoma multiforme, 2 malignant astrocytoma, 2 oligodendroglioma, 1 meningioma, 4 metastatic neoplasms, 2 cavernous hemangiomas, and 1 hematoma. Mean post-operative hospitalization was 5.1 days.

Intracranial catheter placement

Stereotaxis was employed to accurately place ventricular catheters in four patients with "slit" lateral ventricles, and in one patient with a posterior fossa cyst. These locations make catheter placement difficult using conventional techniques.

Complications

In the series of stereotactic biopsies, there was one transient decreased level of consciousness post operatively in a man with a large glioblastoma multiforme, who improved with an increase in his dose of corticosteroids. There was one death related to the procedure, for a mortality rate of 2.6%. A man with multiple cerebral metastases died 48 hours after biopsy due to intracranial hypertension as a result of diffuse cerebral edema. No patients showed intracranial hemorrhage as a result of the biopsy.

The stereotactic craniotomies were characterized by no mortality. An elderly patient with glioblastoma developed pneumonia after a stereotactic craniotomy from which he recovered. Two patients showed transient neurological deficit post craniotomy.

No complications were associated with the use of the stereotactic frame to place an intracranial catheter.

DISCUSSION

Stereotactic surgery is used for **morphological** and **functional** procedures in the brain. Morphologic applications include stereotactic biopsy, stereotactic placement of intracranial catheters, stereotactic craniotomy, brachythereapy, hyperthermia and radiosurgery. Functional applications consist of placement of depth electrodes for seizure focus determination, lesion-making to control pain, movement and behavior disorders, and to transplant tissue into the brain to control movement disorders.

Stereotactic biopsy of intracranial lesions is a common and important diagnostic technique in neurosurgery. Despite the precision of modern neuroimaging techniques, histologic confirmation of diagnoses suggested by neuroimaging is almost always necessary before initiating treatment. In a series of 95 stereotactic biopsies, Friedman et al[3] noted 12 cases where the final tissue diagnosis was considered unlikely preoperatively. The decision to proceed with stereotactic biopsy, rather than open craniotomy, must take into consideration characteristics of the patient and of the lesions being assessed. Lesions appropriate for stereotactic biopsy include lesions in 'eloquent' brain regions such as motor cortex, small and/or deep lesions, or multiple lesions. The elderly or infirm patient unable to tolerate a larger open procedure may be a candidate for stereotactic surgery.

The clinical data presented in this series suggest that stereotactic biopsy is an effective and safe way to diagnose brain lesions. In 89.5% of the stereotactic biopsies a definitive diagnosis could be made from the tissue obtained at biopsy. In the literature, the diagnosis rate varies.[4-6] In a recent series of 300 stereotactic biopsies, Bernstein and Parrent[7] reported a diagnostic success rate of 95.3%. The clinician should be aware that the small volume of tissue typically obtained at stereotactic biopsy may potentially result in sampling error when trying to grade heterogenous tumors such as malignant gliomas. In a series of 30 stereotactically biopsied patients who later came to craniotomy, 36% of the gliomas had their diagnoses changed after craniotomy.[8]

The mortality rate in the current series was 2.6%, with no major morbidity, and a minor morbidity rate of 2.6%, for a total complication rate of 5.2%. There were no symptomatic or fatal intracranial hemorrhages post biopsy. Bernstein and Parrent reported a mortality and major morbidity rate of 3.0%, and a minor morbidity rate of 3.3%, for a total complication rate of 6.3%, and a 5.3% incidence of fatal or symptomatic intracranial hemorrhage after biopsy.[7] A review of 12 stereotactic biopsy series comprising 2,941 patients found an overall complication rate of 3.7%, with rates ranging from 1.2% to 6.9%.[9]

Employing a methodology similar to that used for stereotactic biopsy, in this series point stereotactic craniotomy enabled the more precise localization of intracranial lesions and therefore improved surgical planning, permitting smaller incisions and bone flaps and less manipulation of neural tissue. Our impression was that it resulted in patients leaving the hospital earlier. Although no formal comparisons exist, it is hoped that the more precise resection of brain lesions will improve patient survival, decrease morbidity, and get patients out of hospital earlier. Even more sophisticated technologies are being refined to visualize the entire lesion volume in space using computer interactive technology.

In summary, stereotactic surgery provides a safe and effective method of improving the neurosurgical management of patients with a variety of intracranial disorders. Its precision embodies the trend toward "minimally invasive surgery" and represents a significant advance in the management of diseases of the brain.

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The authors are from the Division of Neurosurgery at the University of Missouri-Columbia Health Sciences Center, Columbia, Missouri.

Reprint requests to:
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University of Missouri-Columbia
Health Sciences Center,
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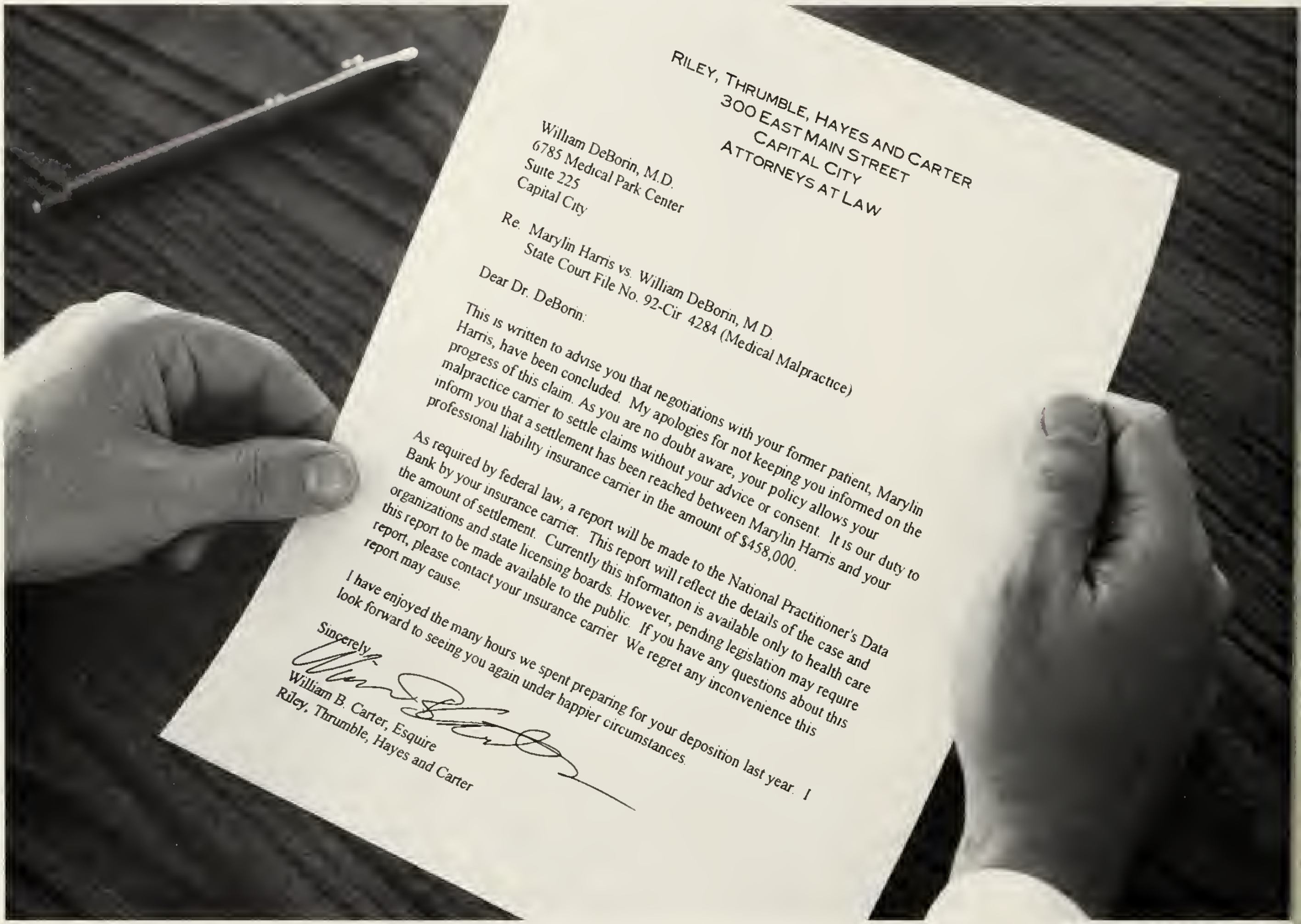

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300 EAST MAIN STREET
CAPITAL CITY
ATTORNEYS AT LAW

William DeBorin, M.D.
6785 Medical Park Center
Suite 225
Capital City

Re: Marylin Harris vs. William DeBorin, M.D.
State Court File No. 92-Cir 4284 (Medical Malpractice)

Dear Dr. DeBorin:

This is written to advise you that negotiations with your former patient, Marylin Harris, have been concluded. My apologies for not keeping you informed on the progress of this claim. As you are no doubt aware, your policy allows your malpractice carrier to settle claims without your advice or consent. It is our duty to inform you that a settlement has been reached between Marylin Harris and your professional liability insurance carrier in the amount of $458,000.

As required by federal law, a report will be made to the National Practitioner's Data Bank by your insurance carrier. This report will reflect the details of the case and the amount of settlement. Currently this information is available only to health care organizations and state licensing boards. However, pending legislation may require this report to be made available to the public. If you have any questions about this report, please contact your insurance carrier. We regret any inconvenience this report may cause.

I have enjoyed the many hours we spent preparing for your deposition last year. I look forward to seeing you again under happier circumstances.

Sincerely,

William B. Carter, Esquire
Riley, Thrumble, Hayes and Carter

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Historical Record

100 Years Ago

A paper presented at the 38th Annual Meeting of the Missouri State Medical Association held in the opera house, Hannibal, Missouri, May 21, 1895.

Some Surgical Sins *(excerpt)*

By Emory Lanphear, MD, PhD, St. Louis, Missouri

There are a number of "sins of omission as well as of commission" which surgeons may well pause to consider. Let no man lay flattering unction to his soul and say: "This is not for me." Wait and see! Profiting if there be aught to censure in your work.

First Sin - OPERATING UPON HOPELESS CASES.

There are some - and they are called surgeons - who will undertake almost any kind of operation regardless of the prospects of cure or failure, nay, even of life or death; and sometimes without consideration of the question of their ability to do the work properly.

The incentives are: a) to get a good fee; b) to have the credit of operating, especially in rare and difficult cases; c) to obtain control of an influential patient from a conservative physician who, recognizing the hopelessness of the case, is doing all he can to ameliorate suffering and prolong life, but persistently refuses entreaties of patient and friends to "do something;" d) ignorance of the real condition.

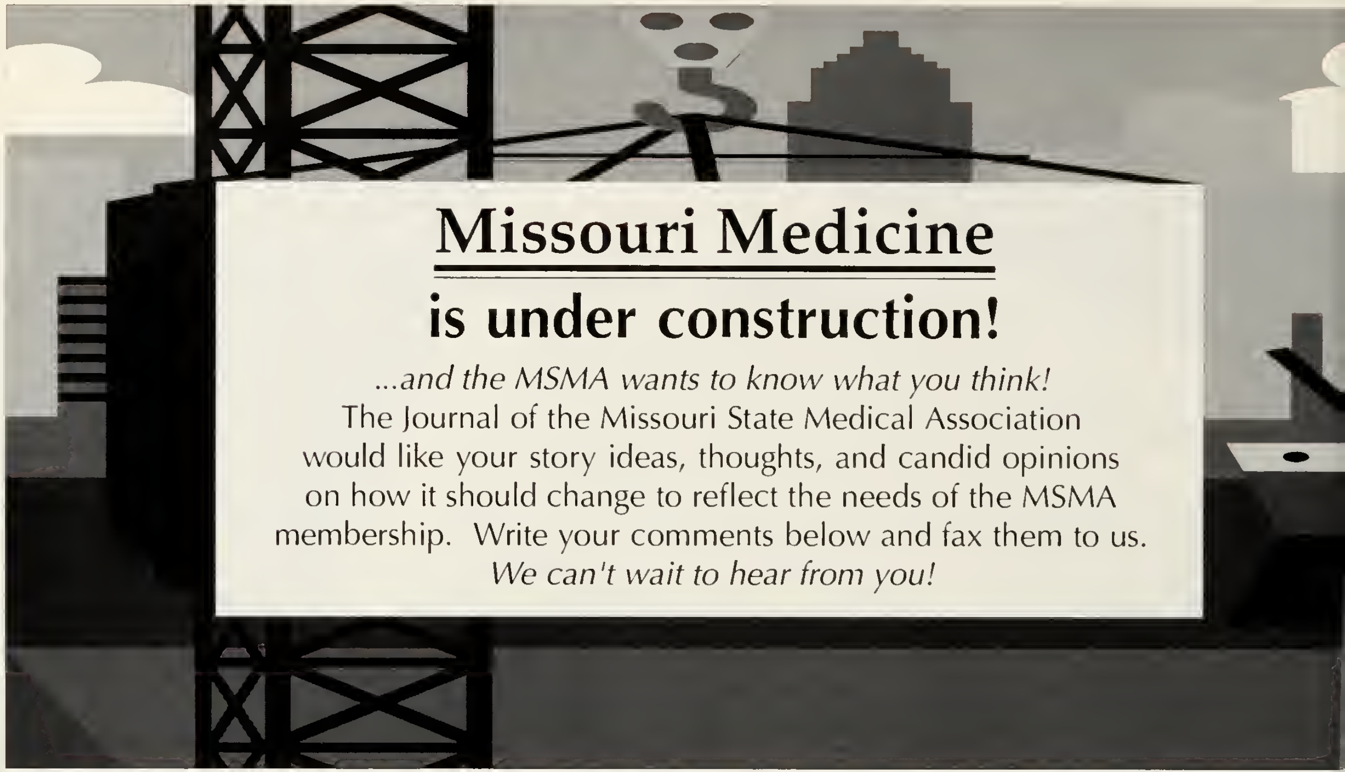
The objections to operating in cases well known to be hopeless are: (1) It is wrong. The doctor who will operate knowing perfectly well that death will follow, or that no benefit will be gained, is no better than a common thief! And the surgeon who will, under like circumstances, operate before a class merely to demonstrate the technique of the operation and show his own adeptness, is little better. Yet I have heard of a "professor" in one of the schools of St. Louis confess to this practice. (2) It brings discredit upon surgery. Therefore, I plead for (a) more careful examination before operation, (b) more thorough diagnostic and prognostic skill, (c) more judgement in the selection of cases; for I am charitable enough to believe that most operations upon hopeless cases are performed, not through desire of notoriety or gain, knowingly to the detriment of the patient, nor yet as an attempt to gain an advantage over a rival, but through ignorance of the actual condition and of the prospects for recovery after operation; indeed, I myself, must plead guilty to having been indiscreet in the selection of cases in the enthusiasm of my early work. Verily, wisdom increaseth with age - and experience. (3) It prevents other patients with similar disease from submitting to operation clearly indicated. I recall an instance in point: I was called to Nebraska to remove a cancerous breast; it was far too advanced for cure; operation could but hasten death and increase suffering; I refused to do anything; after my departure the doctor amputated the breast without entering the axilla(!) and the woman died in six weeks. A lady upon a neighboring farm whom I saw at the same visit had a scirrhus of the breast just developing, almost consented to extirpation, waited and was lost; she was "scared out" by the death of her friend; another life sacrificed through ignorance! The diseases in which this mistake is most liable to be made are: (a) appendicitis with perforative peritonitis; (b) cancer of the breast; (c) hip-joint disease; (d) malignant affections of the uterus; (e) severe, acute trauma where waiting a few hours would determine the question of life or death.

50 Years Ago

Missouri Medicine, *January 1945*

An article entitled, "The Doctor Glares at State Medicine," written by Frederic Nelson appeared in the December 9, 1945 issue of *The Saturday Evening Post*. Two major conclusions, in the writer's opinion at least, with which many doctors will agree are as follow:

> "1. The American doctors are against socialized medicine or any modification thereof which subordinates them to bureaucrats, makes them salaried officials or interferes with their professional standards.
>
> 2. The American doctors are definitely interested in making medical care available to more people, and in plans to pay doctors' bills on the insurance principle - provided such plans are nonpolitical."



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CME Calendar

January

9 - *St. Louis:* **City-Wide Radiology Conference.** Call R. Gilbert Jost, MD, 314/362-7130.

10 to 14 - *Arizona*: **20th Annual Meeting of the Alliance for CME.** 22 credit hrs. Call Daniel Reichard, 202/994-4285.

13 & 14 - *Topeka, KS*: **Short-Term Dynamic Psychotherapy.** 12 credit hrs. Menninger CME, 1-800-288-7377.

13 & 14 - *Kansas City*: **Recent Advances in the Recognition, Diagnosis, and Treatment of Mood Disorders.** 9 credit hrs. Call Jane Colt, 314/577-3452.

20 & 21 - *St. Louis*: **Advanced Trauma Life Support Provider/Provider Refresher Course.** 16/9 credit hrs. Call Joyce Hope, 314/577-8802.

22 - *St. Louis*: **Advanced Trauma Life Support Instructors Course.** Call Joyce Hope, 314/577-8802.

23 to 27 - *St. Louis*: **The Medicolegal Death Investigator Training Course.** 33 credit hrs. Call Mary Fran Ernst, 314/522-6410, ext. 6509.

25 - *St. Louis*: **Seventh Annual Joseph E. Flynn Lecture Series.** 4.5 credit hrs. 314/569-6290.

26 thru 28 - *St. Louis*: **Techniques of Lumbosacral Fixationof Decompression and Fusion.** 20 credit hrs. Call Patrice Lauria, 314/535-4000.

30 to February 3 - *Maui, Hawaii*: **10th Tropical Retreat on Complex Coronary Angioplasty.** 24 credit hrs. Call Beth Paul 816/932-2301-B.

February

3 - *Kansas City*: **Current Issues in Perinatology and Neonatology.** 6 credit hrs. Call The Ed Bixby Institute 800-892-5771, Ext. 4306.

3 & 4 - *Topeka, KS*: **Dissociative States.** 12 credit hrs. Call Menninger CME, 1-800-288-7377.

8 thru 10 - *St. Louis*: **Pediatric Advanced Cardiac and Trauma Support for Life, Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel, 314/577-5385.

10 & 11 - *St. Louis*: **Neuroendoscopy.** 14 credit hrs. Call Patrice Lauria, 314/535-4000.

11 - *St. Louis*: **Update in Gastroentology.** 4 credit hrs. 314/577-8167 or 1-800-553-2712.

12 thru 14 - *Maryland*: **15th Annual Conference on Peritoneal Dialysis.** 18.5 credit hrs. Call Barry Kling, 314/882-4105.

13 - *St. Louis:* **The Role of Nuclear Medicine in the Differential Diagnosis and Management of Renovascular Hypertension.** Call R. Gilbert Jost, MD, 314/362-7130.

15 - *Springfield:* **Pediatric Advanced Life Support.** 7 credit hrs. Call Julie Hartley, 417/885-6111.

17 & 18 - *Topeka, KS*: **Contemporary Concepts in Self-Psychology.** 12 credit hours. Call Menninger, 1-800-288-7377.

18 & 19 - *Springfield*: **Pediatric Advanced Life Support Provider Course.** 17.4 credit hrs. Call Maryann Jeter, 1-800-835-5201.

17 & 18 - *St. Louis*: **Advanced Human Neuroanatomy for OR Personnel.** Call Patrice Lauria, 314/535-4000.

18 to 25 - *Cancun, Mexico*: **Mid-America Health First "Medicine for Primary Care.** 20 credit hrs. Call Gretchen Keefer, 816/932-2012-B.

21 to 24 - *Palm Beach, Florida*: **Reducing Cesarean Birth.** 18 credit hrs. Call Carol Osborne, 816/932-3737-B.

22 - *St. Louis*: **Updates in Pulmonary Medicine.** 314/569-6290.

25 - *Kansas*: **Basic Principles of Psychopharmacology Relevant to Daily Practice.** 6 credit hrs. Call Menninger CME, 800/288-7377.

28 - *Springfield:* **Neonatal Resuscitation Course.** 6.75 credit hrs. Call Julie Hartley, 417/885-6111.

March

3 & 4 - *Topeka, KS*: **Infant and Toddler Psychiatry.** 12 credit hrs. Call Menninger, 1-800-288-7377.

3 to 5 - *Columbia:* **Family Practice Update.** Call Laurie Seigel, 314/882-5666.

4 & 5 - *Georgia*: **Liver Disease in Hemophillia: New Directions in Diagnosis, Management and Treatment.** 2.5 credit hrs. Call National Hemophillia Foundation, 212/219-8180.

5 thru 10 - *Park City, UT*: **Coping with Current Issues in Clinical Practice.** 28 credit hrs. Menninger, 1-800-288-7377.

10 - *Springfield:* **Pediatric Advanced Life Support Provider Course.** 15 credit hrs. Call Julie Hartley, 417/885-6111.

11 - *Topeka, KS*: **Clinical Psychopharmacology Review & Update: Antipsychotic & Mood-Altering Treatments.** 6 credit hrs. Menninger, 1-800-288-7377.

12 thru 15 - *California*: **The Race To Excellence.** 14 credit hrs. Call 202/728-0506.

15 thru 17 - *Kansas*: **Transforming Care: Preserving Excellence.** Call Menninger CME, 800/288-7377.

23 - *St. Louis*: **Pediatric Advanced Life Support Renewal Class.** 7 credit hrs. Call Mary Beth Foerstel, 314/577-5385.

24 thru 26 - *Osage Beach*: **Mental Health in Long Term Care.** 13 credit hrs. Call Jane Colt, 314/577-8726.

25 - *Washington*: **Substance Abuse '95: Programs in Policy and Practice.** 5.5 credit hrs. Call Martha Cosgrove, 202/994-4536.

29 thru 31 - *St. Louis*: **Noninvasive Diagnosis of Vascular Disease.** 314/569-6290.

April

4 & 5 - *St. Louis*: **Transesophageal Echocardiography.** 13 credit hrs. Call Dianne Reid 314/577-8897.

5 to 8 - *San Francisco, California*: **Annual Scientific Sessions of the International Society for Heart & Lung Transplantation.** 314/577-8167 or 1-800-553-2712.

7 & 8 - *St. Louis*: **Advanced Trauma Life Support Provider/Provider Refresher Course.** 16/9 credit hrs. Call Joyce Hope 314/577-8802.

7 & 8 - *Topeka, KS*: **Dyslexia: Assessment & Clinical Management of Language-Based Disorders.** 12 credit hrs. Menninger CME, 1-800-288-7377.

8 - *Columbia*: **Oncology Conference.** Call Laurie Seigel 314/882-4105.

10 - *St. Louis:* **Leroy Sante Lecture.** Call R. Gilbert Jost, MD, 314/362-7130.

24 thru 28 - *St. Louis*: **The Medicolegal Death Investigator Training Course.** 33 credit hrs. Call Mary Fran Ernst, 314/522-6410, ext. 6509.

29 - *Kansas*: **Integrated Treatment of Anxiety Disorders.** 6 credit hrs. Menninger CME 800/288-7377.

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in **Missouri Medicine**. *Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.*

VOLTAREN®
diclofenac sodium
Delayed-Release (enteric-coated) Tablets

CATAFLAM®
diclofenac potassium
Immediate-Release Tablets

Brief Summary (For full Prescribing Information, see Package Insert.)

INDICATIONS AND USAGE

Voltaren Delayed-Release or Cataflam Immediate-Release Tablets are indicated for the acute and chronic treatment of signs and symptoms of rheumatoid arthritis, osteoarthritis, and ankylosing spondylitis. Only Cataflam is indicated for the management of pain and primary dysmenorrhea, when prompt pain relief is desired, because it is formulated to provide earlier plasma concentrations of diclofenac (see CLINICAL PHARMACOLOGY, Pharmacokinetics and Clinical Studies).

CONTRAINDICATIONS

Diclofenac in either formulation, Voltaren or Cataflam, is contraindicated in patients with hypersensitivity to diclofenac. Diclofenac should not be given to patients who have experienced asthma, urticaria, or other allergic-type reactions after taking aspirin or other NSAIDs. Severe, rarely fatal, anaphylactic-like reactions to diclofenac have been reported in such patients.

WARNINGS

Gastrointestinal Effects

Peptic ulceration and gastrointestinal bleeding have been reported in patients receiving diclofenac. Physicians and patients should therefore remain alert for ulceration and bleeding in patients treated chronically with diclofenac even in the absence of previous G.I. tract symptoms. It is recommended that patients be maintained on the lowest dose of diclofenac possible, consistent with achieving a satisfactory therapeutic response.

Risk of G.I. Ulcerations, Bleeding, and Perforation with NSAID Therapy: Serious gastrointestinal toxicity such as bleeding, ulceration, and perforation can occur at any time, with or without warning symptoms, in patients treated chronically with NSAID therapy. Although minor upper gastrointestinal problems, such as dyspepsia, are common, usually developing early in therapy, physicians should remain alert for ulceration and bleeding in patients treated chronically with NSAIDs even in the absence of previous G.I. tract symptoms. In patients observed in clinical trials of several months to 2 years' duration, symptomatic upper G.I. ulcers, gross bleeding, or perforation appear to occur in approximately 1% of patients for 3-6 months, and in about 2%-4% of patients treated for 1 year. Physicians should inform patients about the signs and/or symptoms of serious G.I. toxicity and what steps to take if they occur.

Studies to date have not identified any subset of patients not at risk of developing peptic ulceration and bleeding. Except for a prior history of serious G.I. events and other risk factors known to be associated with peptic ulcer disease, such as alcoholism, smoking, etc., no risk factors (e.g., age, sex) have been associated with increased risk. Elderly or debilitated patients seem to tolerate ulceration or bleeding less well than other individuals, and most spontaneous reports of fatal G.I. events are in this population. Studies to date are inconclusive concerning the relative risk of various NSAIDs in causing such reactions. High doses of any NSAID probably carry a greater risk of these reactions, although controlled clinical trials showing this do not exist in most cases. In considering the use of relatively large doses (within the recommended dosage range), sufficient benefit should be anticipated to offset the potential increased risk of G.I. toxicity.

Hepatic Effects

As with other NSAIDs, elevations of one or more liver tests may occur during diclofenac therapy. These laboratory abnormalities may progress, may remain unchanged, or may be transient with continued therapy. Borderline elevations (i.e., less than 3 times the ULN [= the Upper Limit of the Normal range]), or greater elevations of transaminases occurred in about 15% of diclofenac-treated patients. Of the hepatic enzymes, ALT (SGPT) is the one recommended for the monitoring of liver injury.

In clinical trials, meaningful elevations (i.e., more than 3 times the ULN) of AST (SGOT) (ALT was not measured in all studies) occurred in about 2% of approximately 5700 patients at some time during Voltaren treatment. In a large, open, controlled trial, meaningful elevations of ALT and/or AST occurred in about 4% of 3700 patients treated for 2-6 months, including marked elevations (i.e., more than 8 times the ULN) in about 1% of the 3700 patients. In that open-label study, a higher incidence of borderline (less than 3 times the ULN), moderate (3-8 times the ULN), and marked (>8 times the ULN) elevations of ALT or AST was observed in patients receiving diclofenac when compared to other NSAIDs. Transaminase elevations were seen more frequently in patients with osteoarthritis than in those with rheumatoid arthritis (see ADVERSE REACTIONS).

In addition to the enzyme elevations seen in clinical trials, rare cases of severe hepatic reactions, including jaundice and fatal fulminant hepatitis, have been reported.

Physicians should measure transaminases periodically in patients receiving long-term therapy with diclofenac, because severe hepatotoxicity may develop without a prodrome of distinguishing symptoms. The optimum times for making the first and subsequent transaminase measurements are not known. In the largest U.S. trial (open-label) that involved 3700 patients monitored first at 8 weeks and 1200 patients monitored again at 24 weeks, almost all meaningful elevations in transaminases were detected before patients became symptomatic. In 42 of the 51 patients in all trials who developed marked transaminase elevations, abnormal tests occurred during the first 2 months of therapy with diclofenac. Based on this experience, if diclofenac is used chronically, the first transaminase measurement should be made no later than 8 weeks after the start of diclofenac treatment. As with other NSAIDs, if abnormal liver tests persist or worsen, if clinical signs and/or symptoms consistent with liver disease develop, or if systemic manifestations occur (e.g., eosinophilia, rash, etc.), diclofenac should be discontinued.

To minimize the possibility that hepatic injury will become severe between transaminase measurements, physicians should inform patients of the warning signs and symptoms of hepatotoxicity (e.g., nausea, fatigue, lethargy, pruritus, jaundice, right upper quadrant tenderness, and "flu-like" symptoms), and the appropriate action patients should take if these signs and symptoms appear.

PRECAUTIONS

General

Allergic Reactions: As with other NSAIDs, allergic reactions including anaphylaxis have been reported with diclofenac. Specific allergic manifestations consisting of swelling of eyelids, lips, pharynx, and larynx; urticaria, asthma, and bronchospasm, sometimes with a concomitant fall in blood pressure (severe at times) have been observed in clinical trials and/or the marketing experience with diclofenac. Anaphylaxis has rarely been reported from foreign sources; in U.S. clinical trials with diclofenac in over 6000 patients, 1 case of anaphylaxis was reported. In controlled clinical trials, allergic reactions have been observed at an incidence of 0.5%. These reactions can occur without prior exposure to the drug.

Fluid Retention and Edema: Fluid retention and edema have been observed in some patients taking diclofenac. Therefore, as with other NSAIDs, diclofenac should be used with caution in patients with a history of cardiac decompensation, hypertension, or other conditions predisposing to fluid retention.

Renal Effects: As a class, NSAIDs have been associated with renal papillary necrosis and other abnormal renal pathology in long-term administration to animals. In oral diclofenac studies in animals, some evidence of renal toxicity was noted. Isolated incidents of papillary necrosis were observed in a few animals at high doses (20-120 mg/kg) in several baboon subacute studies. In patients treated with diclofenac, rare cases of interstitial nephritis and papillary necrosis have been reported (see ADVERSE REACTIONS).

A second form of renal toxicity, generally associated with NSAIDs, is seen in patients with conditions leading to a reduction in renal blood flow or blood volume, where renal prostaglandins have a supportive role in the maintenance of renal perfusion. In these patients, administration of an NSAID results in a dose-dependent decrease in prostaglandin synthesis and, secondarily, in a reduction of renal blood flow, which may precipitate overt renal failure. Patients at greatest risk of this reaction are those with impaired renal function, heart failure, liver dysfunction, those taking diuretics, and the elderly. Discontinuation of NSAID therapy is typically followed by recovery to the pretreatment state.

Cases of significant renal failure in patients receiving diclofenac have been reported from marketing experience, but were not observed in over 4000 patients in clinical trials during which serum creatinine and BUN values were followed serially. There were only 11 patients (0.3%) whose serum creatinine and concurrent serum BUN values were greater than 2.0 mg/dL and 40 mg/dL, respectively, while on diclofenac (mean rise in the 11 patients: creatinine 2.3 mg/dL and BUN 28.4 mg/dL).

Since diclofenac metabolites are eliminated primarily by the kidneys, patients with significantly impaired renal function should be more closely monitored than subjects with normal renal function.

Porphyria: The use of diclofenac in patients with hepatic porphyria should be avoided. To date, 1 patient has been described in whom diclofenac probably triggered a clinical attack of porphyria. The postulated mechanism, demonstrated in rats, for causing such attacks by diclofenac, as well as some other NSAIDs, is through stimulation of the porphyrin precursor delta-aminolevulinic acid (ALA).

Information for Patients

Diclofenac, like other drugs of its class, is not free of side effects. The side effects of these drugs can cause discomfort and, rarely, there are more serious side effects, such as gastrointestinal bleeding, and more rarely, liver toxicity (see WARNINGS, Hepatic Effects), which may result in hospitalization and even fatal outcomes.

NSAIDs are often essential agents in the management of arthritis and have a major role in the management of pain, but they also may be commonly employed for conditions that are less serious.

Physicians may wish to discuss with their patients the potential risks (see WARNINGS, PRECAUTIONS, and ADVERSE REACTIONS) and likely benefits of NSAID treatment, particularly when the drugs are used for less serious conditions where treatment without NSAIDs may represent an acceptable alternative to both the patient and physician.

Laboratory Tests

Because serious G.I. tract ulceration and bleeding can occur without warning symptoms, physicians should follow chronically treated patients for the signs and symptoms of ulceration and bleeding and should inform them of the importance of this follow-up (see WARNINGS, *Risk of G.I. Ulcerations, Bleeding, and Perforation with NSAID Therapy*). If diclofenac is used chronically, patients should also be instructed to report any signs and symptoms that might be due to hepatotoxicity of diclofenac; these symptoms may become evident between visits when periodic liver laboratory tests are performed (see WARNINGS, Hepatic Effects).

Drug Interactions

Aspirin: Concomitant administration of diclofenac and aspirin is not recommended because diclofenac is displaced from its binding sites during the concomitant administration of aspirin, resulting in lower plasma concentrations, peak plasma levels, and AUC values.

Anticoagulants: While studies have not shown diclofenac to interact with anticoagulants of the warfarin type, caution should be exercised, nonetheless, since interactions have been seen with other NSAIDs. Because prostaglandins play an important role in hemostasis, and NSAIDs affect platelet function as well, concurrent therapy with all NSAIDs, including diclofenac, and warfarin requires close monitoring of patients to be certain that no change in their anticoagulant dosage is required.

Digoxin, Methotrexate, Cyclosporine: Diclofenac, like other NSAIDs, may affect renal prostaglandins and increase the toxicity of certain drugs. Ingestion of diclofenac may increase serum concentrations of digoxin and methotrexate and increase cyclosporine's nephrotoxicity. Patients who begin taking diclofenac or who increase their diclofenac dose or any other NSAID while taking digoxin, methotrexate, or cyclosporine may develop toxicity characteristics for these drugs. They should be observed closely, particularly if renal function is impaired. In the case of digoxin, serum levels should be monitored.

Lithium: Diclofenac decreases lithium renal clearance and increases lithium plasma levels. In patients taking diclofenac and lithium concomitantly, lithium toxicity may develop.

Oral Hypoglycemics: Diclofenac does not alter glucose metabolism in normal subjects nor does it alter the effects of oral hypoglycemic agents. There are rare reports, however, from marketing experiences of changes in effects of insulin or oral hypoglycemic agents in the presence of diclofenac that necessitated changes in the doses of such agents. Both hypo- and hyperglycemic effects have been reported. A direct causal relationship has not been established, but physicians should consider the possibility that diclofenac may alter a diabetic patient's response to insulin or oral hypoglycemic agents.

Diuretics: Diclofenac and other NSAIDs can inhibit the activity of diuretics. Concomitant treatment with potassium-sparing diuretics may be associated with increased serum potassium levels.

Other Drugs: In small groups of patients (7-10/interaction study), the concomitant administration of azathioprine, gold, chloroquine, D-penicillamine, prednisolone, doxycycline, or digitoxin did not significantly affect the peak levels and AUC values of diclofenac.

Protein Binding

In vitro, diclofenac interferes minimally or not at all with the protein binding of salicylic acid (20% decrease in binding), tolbutamide, prednisolone (10% decrease in binding), or warfarin. Benzylpenicillin, ampicillin, oxacillin, chlortetracycline, doxycycline, cephalothin, erythromycin, and sulfamethoxazole have no influence in vitro on the protein binding of diclofenac in human serum.

Drug/Laboratory Test Interactions

Effect on Blood Coagulation: Diclofenac increases platelet aggregation time but does not affect bleeding time, plasma thrombin clotting time, plasma fibrinogen, or factors V and VII to XII. Statistically significant changes in prothrombin and partial thromboplastin times have been reported in normal volunteers. The mean changes were observed to be less than 1 second in both instances, however, and are unlikely to be clinically important. Diclofenac is a prostaglandin synthetase inhibitor, however, and all drugs that inhibit prostaglandin synthesis interfere with platelet function to some degree; therefore, patients who may be adversely affected by such an action should be carefully observed.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term carcinogenicity studies in rats given diclofenac sodium up to 2 mg/kg/day or (12 mg/m²/day approximately the human dose) have revealed no significant increases in tumor incidence. There was a slight increase in benign mammary fibroadenomas in mid-dose-treated (0.5 mg/kg/day or 3 mg/m²/day) female rats (high-dose females had excessive mortality), but the increase was not significant for this common rat tumor. A 2-year carcinogenicity study conducted in mice employing diclofenac sodium at doses up to 0.3 mg/kg/day (0.9 mg/m²/day) in males and 1 mg/kg/day (3 mg/m²/day) in females did not reveal any oncogenic potential. Diclofenac sodium did not show mutagenic activity in in vitro point mutation assays in mammalian (mouse lymphoma) and microbial (yeast, Ames) test systems and was nonmutagenic in several mammalian in vitro and in vivo tests, including dominant lethal and male germinal epithelial chromosomal studies in mice, and nucleus anomaly and chromosomal aberration studies in Chinese hamsters. Diclofenac sodium administered to male and female rats at 4 mg/kg/day (24 mg/m²/day) did not affect fertility.

Teratogenic Effects

There are no adequate and well-controlled studies in pregnant women. Diclofenac should be used during pregnancy only if the benefits to the mother justify the potential risk to the fetus.

Pregnancy Category B: Reproduction studies have been performed in mice given diclofenac sodium (up to 20 mg/kg/day or 60 mg/m²/day) and in rats and rabbits given diclofenac sodium (up to 10 mg/kg/day or 60 mg/m²/day for rats, and 80 mg/m²/day for rabbits), and have revealed no evidence of teratogenicity despite the induction of maternal toxicity and fetal toxicity. In rats, maternally toxic doses were associated with dystocia, prolonged gestation, reduced fetal weights and growth, and reduced fetal survival. Diclofenac has been shown to cross the placental barrier in mice and rats.

Labor and Delivery

The effects of diclofenac on labor and delivery in pregnant women are unknown. Because of the known effects of prostaglandin-inhibiting drugs on the fetal cardiovascular system (closure of ductus arteriosus), use of diclofenac during late pregnancy should be avoided and, as with other nonsteroidal anti-inflammatory drugs, it is possible that diclofenac may inhibit uterine contraction.

Nursing Mothers

Diclofenac has been found in the milk of nursing mothers. As with other drugs that are excreted in milk, diclofenac is not recommended for use in nursing women.

Pediatric Use

Safety and effectiveness of diclofenac in children have not been established.

Geriatric Use

Of the more than 6000 patients treated with diclofenac in U.S. trials, 31% were older than 65 years of age. No overall difference was observed between efficacy, adverse event or pharmacokinetic profiles of older and younger patients. As with any NSAID, the elderly are likely to tolerate adverse reactions less well than younger patients.

ADVERSE REACTIONS

Adverse reaction information is derived from blinded, controlled and open-label clinical trials, as well as worldwide marketing experience. In the description below, rates of more common events represent clinical study results; rarer events are derived principally from marketing experience and publications, and accurate rate estimates are generally not possible.

In a 6-month, double-blind trial comparing Voltaren Delayed-Release Tablets (N=197) vs. Cataflam Immediate-Release Tablets (N=196) vs. ibuprofen (N=197), adverse reactions were similar in nature and frequency. In 718 patients treated for shorter periods, i.e., 2 weeks or less, with *Cataflam Immediate-Release Tablets*, adverse reactions were reported one-half to one-tenth as frequently as by patients treated for longer periods.

The incidence of common adverse reactions (greater than 1%) is based upon controlled clinical trials in 1543 patients treated up to 13 weeks with *Voltaren Delayed-Release Tablets*. By far the most common adverse effects were gastrointestinal symptoms, most of them minor, occurring in about 20%, and leading to discontinuation in about 3%, of patients. Peptic ulcer or G.I. bleeding occurred in clinical trials in 0.6% (95% confidence interval 0.2% to 1%) of approximately 1800 patients during their first 3 months of diclofenac treatment and in 1.6% (95% confidence interval 0.8% to 2.4%) of approximately 800 patients followed for 1 year.

Gastrointestinal symptoms were followed in frequency by central nervous system side effects such as headache (7%) and dizziness (3%).

Meaningful (exceeding 3 times the Upper Limit of Normal) elevations of ALT (SGPT) or AST (SGOT) occurred at an overall rate of approximately 2% during the first 2 months of Voltaren treatment. Unlike aspirin-related elevations, which occur more frequently in patients with rheumatoid arthritis, these elevations were more frequently observed in patients with osteoarthritis (2.6%) than in patients with rheumatoid arthritis (0.7%). Marked elevations (exceeding 8 times the ULN) were seen in 1% of patients treated for 2-6 months (see WARNINGS, Hepatic Effects).

The following adverse reactions were reported in patients treated with diclofenac.

Incidence Greater Than 1% - Causal Relationship Probable: (All derived from clinical trials.)

Body as a Whole: Abdominal pain or cramps,* headache,* fluid retention, abdominal distention

Digestive: Diarrhea,* indigestion,* nausea,* constipation,* flatulence, liver test abnormalities,* PUB, i.e., peptic ulcer, with or without bleeding and/or perforation, or bleeding without ulcer (see above and also WARNINGS)

Nervous System: Dizziness

Skin and Appendages: Rash, pruritus

Special Senses: Tinnitus

*Incidence, 3% to 9% (incidence of unmarked reactions is 1%-3%)

Incidence Less Than 1% - Causal Relationship Probable: (The following reactions have been reported in patients taking diclofenac under circumstances that do not permit a clear attribution of the reaction to diclofenac. These reactions are being included as alerting information to physicians. Adverse reactions reported only in *worldwide marketing experience* or in the literature, not seen in clinical trials, are considered rare and are italicized.)

Body as a Whole: Malaise, swelling of lips and tongue, photosensitivity, *anaphylaxis*, anaphylactoid reactions

Cardiovascular: Hypertension, congestive heart failure

Digestive: Vomiting, jaundice, melena, aphthous stomatitis, dry mouth and mucous membranes, bloody diarrhea, hepatitis, *hepatic necrosis*, appetite change, pancreatitis with or without concomitant hepatitis, *colitis*

Hemic and Lymphatic: Hemoglobin decrease, leukopenia, thrombocytopenia, *hemolytic anemia*, *aplastic anemia*, *agranulocytosis*, purpura, *allergic purpura*

Metabolic and Nutritional Disorders: Azotemia

Nervous System: Insomnia, drowsiness, depression, diplopia, anxiety, irritability, *aseptic meningitis*

Respiratory: Epistaxis, asthma, laryngeal edema

Skin and Appendages: Alopecia, urticaria, eczema, dermatitis, *bullous eruption*, *erythema multiforme major*, angioedema, *Stevens-Johnson syndrome*

Special Senses: Blurred vision, taste disorder, reversible hearing loss, scotoma

Urogenital: *Nephrotic syndrome*, proteinuria, *oliguria*, *interstitial nephritis*, *papillary necrosis*, *acute renal failure*

Incidence Less Than 1% - Causal Relationship Unknown: (Adverse reactions reported only in worldwide marketing experience or in the literature, not seen in clinical trials, are considered rare and are italicized.)

Body as a Whole: Chest pain

Cardiovascular: Palpitations, *flushing*, tachycardia, premature ventricular contractions, myocardial infarction

Digestive: Esophageal lesions.

Hemic and Lymphatic: *Bruising*

Metabolic and Nutritional Disorders: Hypoglycemia, *weight loss*.

Nervous System: Paresthesia, memory disturbance, nightmares, tremor, tic, *abnormal coordination*, convulsions, *disorientation*, *psychotic reaction*.

Respiratory: Dyspnea, hyperventilation, edema of pharynx

Skin and Appendages: Excess perspiration, *exfoliative dermatitis*.

Special Senses: Vitreous floaters, night blindness, amblyopia

Urogenital: Urinary frequency, nocturia, hematuria, impotence, vaginal bleeding

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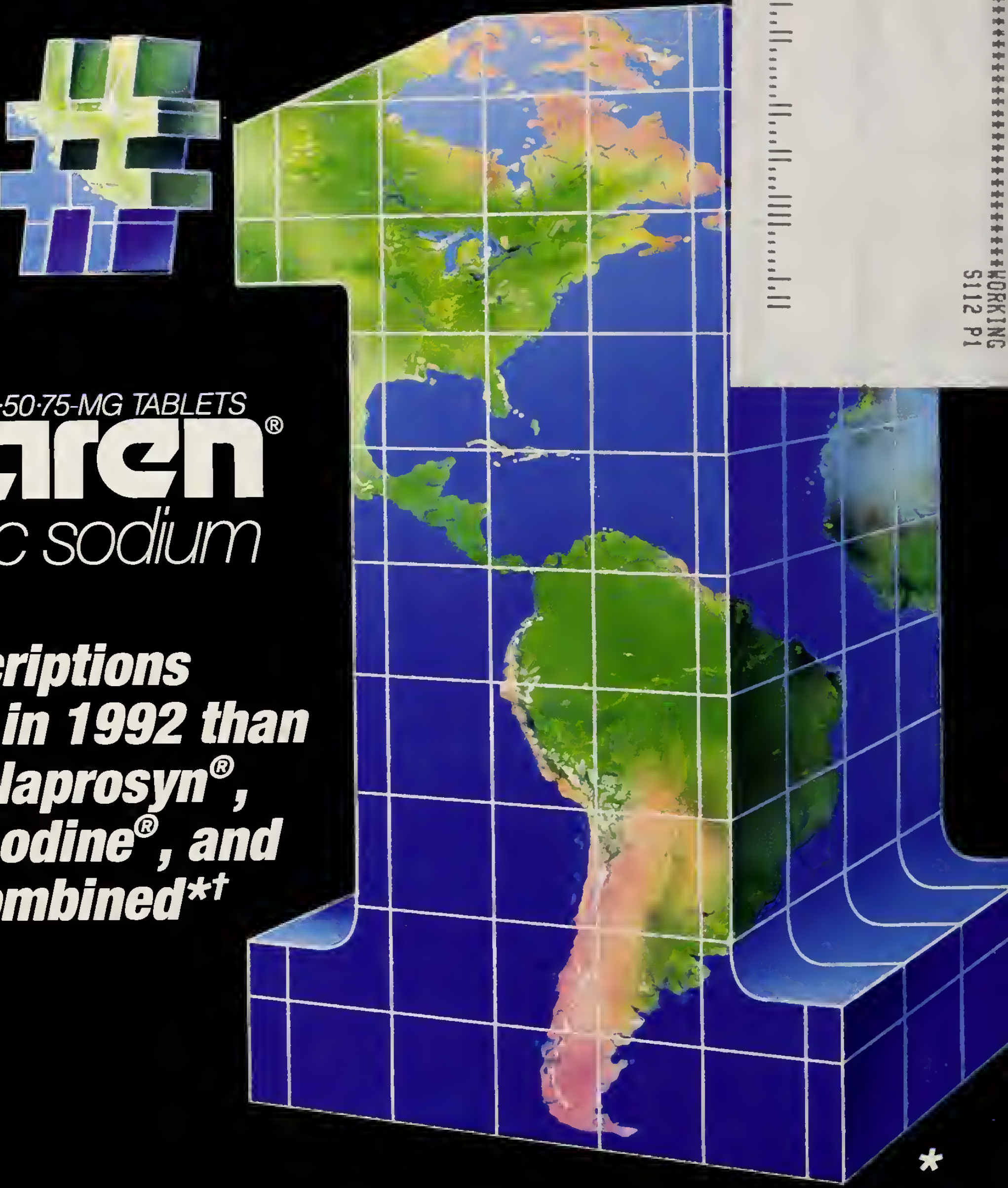

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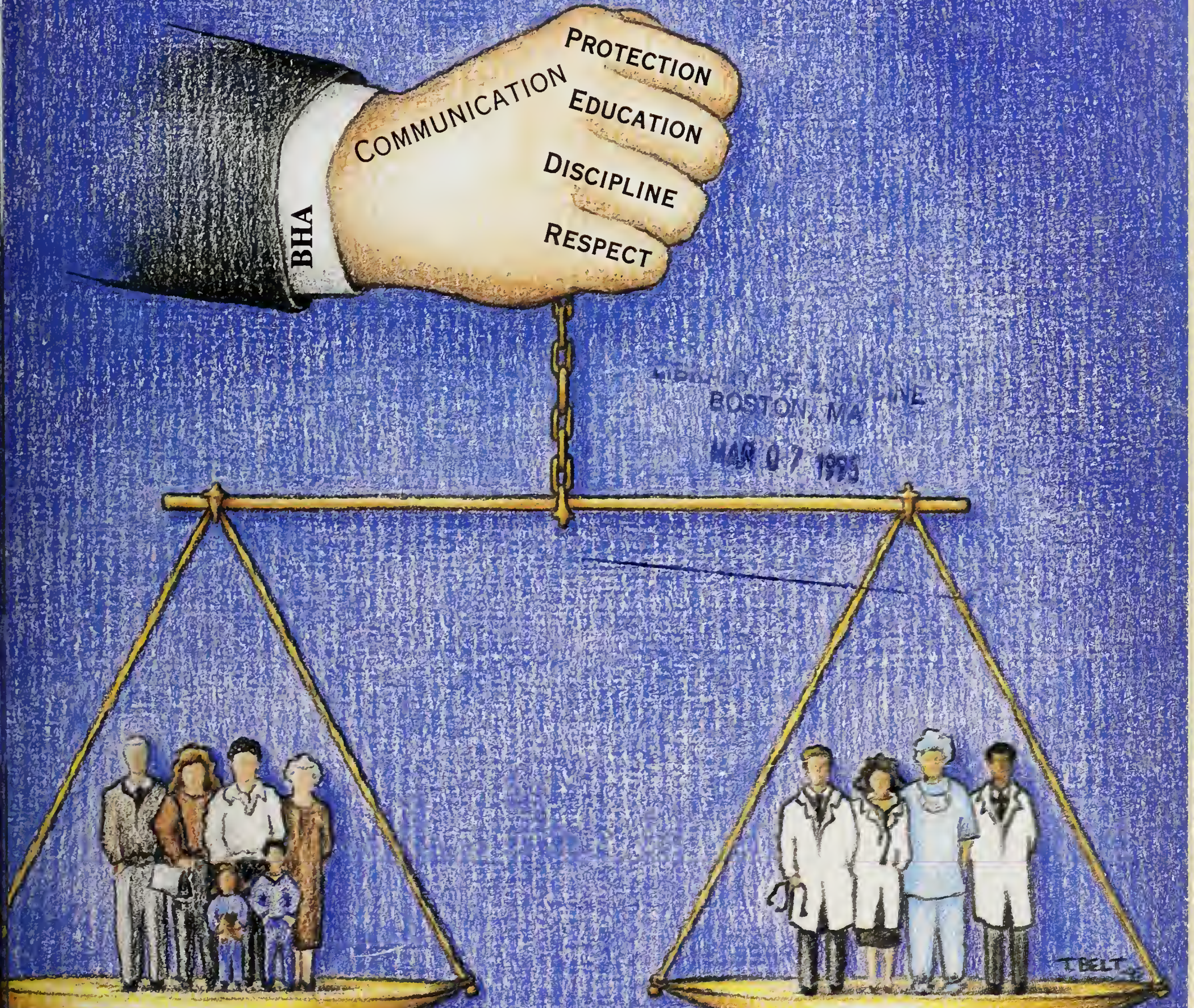
388-42171-A 2

Missouri Medicine

Journal of the Missouri State Medical Association February 1995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Cover Story: ■ The Board of Healing Arts improving relations with physicians ■ The Board & MPHP find agreement ■ Collaborative Practice Hearings Scheduled

Also in this issue: ■ Practice Management: Medical Practice Valuation ■ DOH: CHART Program ■ Otolaryngology Quiz #1 ■ Osteochondroma of the Scapula ■ De Novo Malignancy After Renal Transplantation

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VOLUME 92, NUMBER 2

Cover Story

The Board of Healing Arts is solving problems by communicating with physicians 74

Collaborative Practice Guidelines 76

The Board and the MSMA Physician Health Program share rehabilitation goal for impaired physicians 77

The Cover:
Tammy Belt is a freelance artist living in Centertown, MO. She has a bachelor of science degree in art. Her work has two directions: realistic representation with colored pencil or pen & ink or non-objective acrylic painting.

Editor's Desk

"Getting to Know You" 58
J. Regan Thomas, MD, Editor

Otolaryngology Quiz #1 71
David Parsons, MD & Jerry Templer, MD

Perspectives

A Managed Care Specialist *Richard V. Bradley, MD* 63

Practice Management

Physician Practice Acquisitions and Mergers: Medical Practice Valuation 65
Tom Bennett, Exec. Vice Pres., MSMS, Inc. & Edward G. Detwiler, ASA

Public Health

Managing the Journey of Change: Assisting Communities in Assessing and Improving Community Health Status 81
Maureen E. Dempsey, MD, CHART, Physician Project Specialist

Scientific Section

De Novo Malignancy After Renal Transplantation 90
Mark W. Smith, MD, Sharon K. Rose, MSN, RN, Sunder M. Lal, MD and Gilbert Ross, Jr., MD

Osteochondroma of the Scapula 95
Joseph F. Galate, MD, J. Mark Blue, MD, and Robert W. Gaines, MD

At the Capitol 61
Membership Notes 68
Information for Contributors 89
CME Calendar 98
Classified Advertisements 100
Historical Record 102

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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Printed by the Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri 65251.

Editor's Desk

"Getting To Know You"

J. Regan Thomas, MD, Editor

The 88th General Assembly is in full swing at this time and the Broadway musical tune "Getting To Know You" may serve as a good theme song for each of you with respect to your representatives and senators. Already, dozens of bills have been introduced that would affect health care and your individual practices and unfortunately, not all of these will be music to your ears. Nothing could be more helpful in terms of participation in this proposed legislation than personal contact and relationship with your legislators. Your voice can be particularly influential in the discussion of these bills and your local legislator will typically be surprisingly responsive to your contacts. As these measures are evaluated, discussed and debated, it is incumbent upon all of us to enlighten and educate our lawmakers on the issues critical to medicine and patient care.

About 25% of all of the legislators are new this year and it's a great opportunity to have each of us get involved in the political process as we get to know the new people in Jefferson City. Likewise, renewing contacts with senators and representatives who have been re-elected, is a chance to let them know that you appreciate the work they do. It's also an important opportunity for them to see you as a resource helping them develop policy and opinions. MSMA will provide materials to you to similarly use as a resource, including the weekly *Legislative Report*.

Intelligent, rational people may develop different opinions on any given issue. That will be true within the ranks of Missouri physicians. Certainly there will be different sides either supporting or opposing the various bills and legislative proposals. It is vital, however, for physicians not to be on the sidelines, but to be involved in the process and to make their opinions known. In a democratic society, the majority rules and there will be times when measures that we individually support may not become rule of law. On the other hand, these rules and laws should not be developed in a physician vacuum and we should ensure that the decisions which are made are developed in an environment of informed, reasoned input by the medical community.

Meeting with your representatives and senators can be as profitable for them as well as for you. This is a "give and take" relationship. On the other hand, don't forget these individuals work for you and you should feel very comfortable making that contact. The word "representative" means just what it says. However, unless you are there and involved making those contacts, your point of view may never take place. After the first meeting, as in many other situations, the follow up times are much easier and you will feel more comfortable and confident each time you are involved with the process.

My experience has been that personal contact and face to face conversation always has more impact than letter writing. However, there are certain times and situations where that's just not possible. In next month's editorial, I will pass on some "helpful hints" and "how to do it" for writing your senators and representatives along with some ideas about how to make sure those letters are read.

Finally, remember your staff at the Missouri State Medical Association is extremely knowledgeable in these areas. You should always feel free to contact them and in fact, if you're going to be visiting your representative, it's probably a good idea to notify the MSMA office for their help and input. They will likewise look forward to your contact and usually prove to be particularly helpful.

THE DO'S

Here is a list of "do's and don'ts" which may be helpful as you meet your legislator and ensure a more productive session during that interaction.

DO: Always make an appointment, either by phone call or by letter in advance. The likelihood of simply walking into the legislator's office and making connections is not very likely and the visitor has a better chance of success if a previous appointment has been made with the legislator's appointment secretary.

DO: Outline in your telephone call or in your letter the issues which you wish to discuss at the meeting. It is a good idea to reference previous communication you may have had with the legislator in the past. You would like the legislator to feel knowledgeable and prepared for the meeting so that your conversation will be more productive.

DO: Restrict your topics to only one or two. A smaller focused agenda has greater likelihood of accomplishing a success.

DO: Bring along some printed material including an outline or fact sheet regarding the topic. After you have presented the background facts, be sure and present your ideas for a suggested solution. Very important, be sure to leave your name, address and phone number on the fact sheet.

DO: Make some specific suggestions as to the solutions to the problems you are discussing. Raising the questions is the easy part, coming up with proper solutions is the more difficult area and where your legislator will need the greatest guidance. You want to make sure that you agree with the solutions which are developed.

DO: Try to develop your presentation so it will be direct and concise and at the same time, mindful of the legislator's busy schedule. Fifteen minutes is a pretty good target area and your thoughtfulness will be appreciated by the legislator and his or her staff.

DO: Offer to provide additional information or to return for further conversation. Your legislator may want additional facts and this will help establish you as an individual appropriate for consultation and reference.

DO: Be sure and write a thank you letter as soon as you get home. This serves as an appropriate courtesy but also helps to cement your visit in the mind of the legislator and the staff.

THE DON'TS

There are some important "don'ts" which should be remembered. Most of these are courtesy and common sense, but it may be helpful to list some of them as a reminder.

DON'T: Be late for your appointment.

DON'T: Be disappointed if your legislator is late.

DON'T: Be disappointed if the situation occurs where your legislator is not able to make the meeting. In that case, you will most likely see a legislative assistant. Particularly in some offices, the legislative assistant may actually be more knowledgeable and a better contact than the legislator in terms of developing policy views. The legislators often depend on their staff for this sort of material and your contact with that assistant will not be wasted. Sometimes, in fact, you can accomplish even more under these circumstances.

DON'T: Over stay your welcome. As noted earlier, be organized and brief. If the staff or legislator wishes to prolong the conversation, you'll get a sense of that.

DON'T: Try to settle all of your problems or multiple problems in one visit. The best idea is to present only the issue of greatest concern to you and about which your legislator can do something.

DON'T: Be antagonistic, abrasive or adversarial. An angry or negative approach will close more doors than open them.

DON'T: Expect miracles. Legislators are people. Like the rest of us, it takes time for them to be educated and informed. Likewise, you must realize that there are others with opposing points of view making similar contacts. It is incumbent upon you to provide information in a way that will be most convincing.

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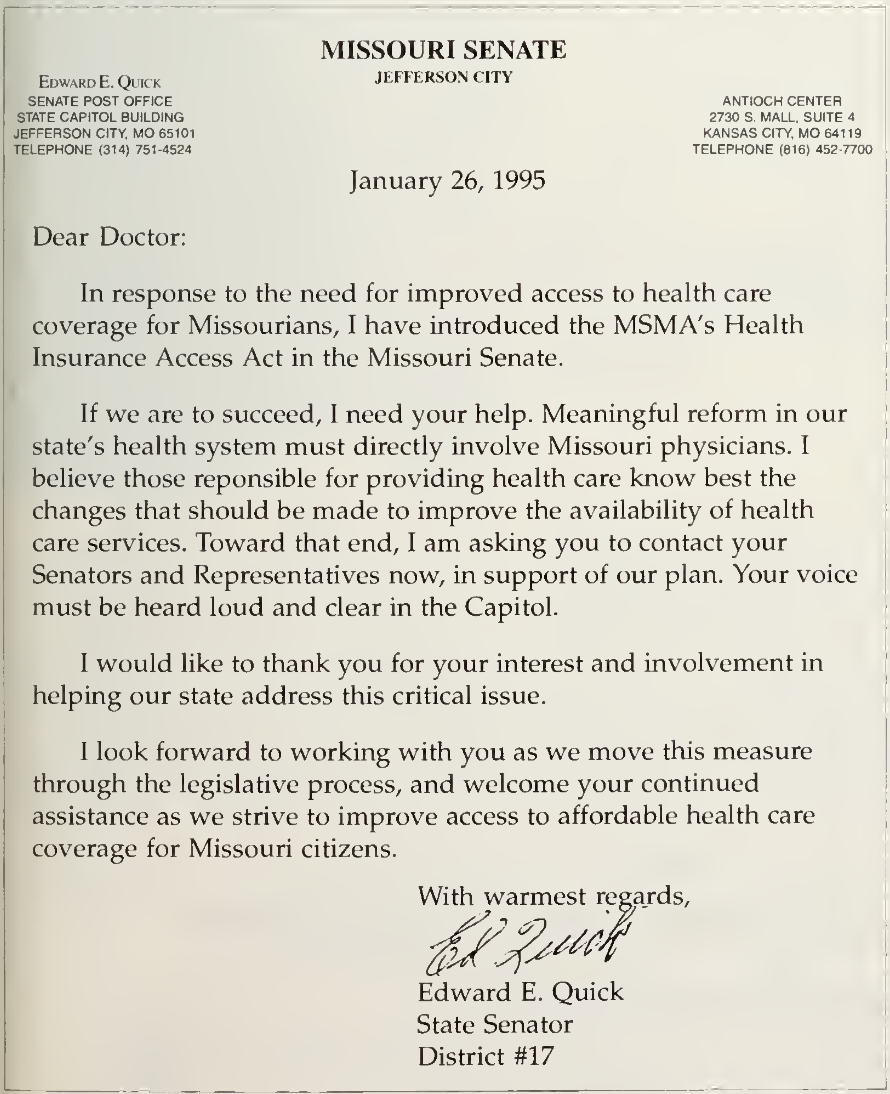
Bill Numbers Assigned

Patient Fairness Act - SB 197 & HB 367
Intractable Pain Act - SB 125 & HB 169
Health Insurance Access Act - SB 318

MSMA's "Patient Fairness Act" received numbers in both houses. When conversing with your legislator, please refer to **SB 197**, sponsored by Sen. John Scott, and the identical **HB 367**, sponsored by Rep. Jim Barnes. The Intractable Pain Act sponsored by Sen. Mike Lybyer of Huggins and Rep. Jerry McBride of Rolla is numbered **SB 125** and **HB 169**. MSMA's Insurance Market Reform Bill has been introduced in the Senate by Sen. Ed Quick as **SB 318**.



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TELEPHONE (314) 751-4524

ANTIOCH CENTER
2730 S. MALL, SUITE 4
KANSAS CITY, MO 64119
TELEPHONE (816) 452-7700

January 26, 1995

Dear Doctor:

In response to the need for improved access to health care coverage for Missourians, I have introduced the MSMA's Health Insurance Access Act in the Missouri Senate.

If we are to succeed, I need your help. Meaningful reform in our state's health system must directly involve Missouri physicians. I believe those reponsible for providing health care know best the changes that should be made to improve the availability of health care services. Toward that end, I am asking you to contact your Senators and Representatives now, in support of our plan. Your voice must be heard loud and clear in the Capitol.

I would like to thank you for your interest and involvement in helping our state address this critical issue.

I look forward to working with you as we move this measure through the legislative process, and welcome your continued assistance as we strive to improve access to affordable health care coverage for Missouri citizens.

With warmest regards,

Ed Quick

Edward E. Quick
State Senator
District #17

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MSMA lobbyists will discuss current legislative issues.
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FEBRUARY 21
8:00 am Coffee & Rolls with Legislators
Rm 3 & 4, lower level of the Capitol Building

10:00 am Observe sessions in House & Senate.

For more information contact Becky Moore, MSMAA Vice President-Legislation, 417/623-1195. A block of rooms has been reserved. For hotel accomodations at the Capitol Plaza Hotel, call 314/635-1234 as soon as possible.

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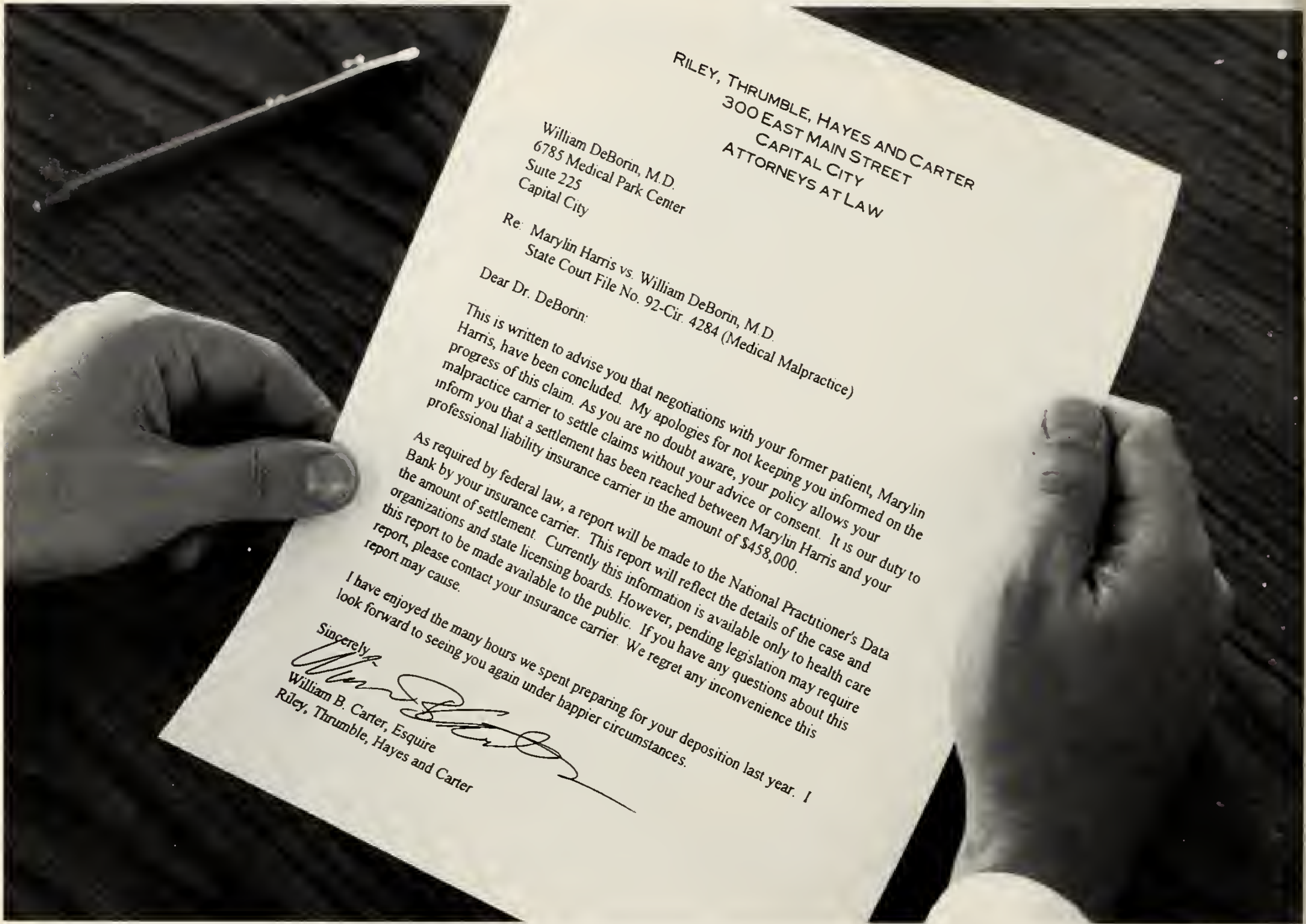

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CAPITAL CITY
ATTORNEYS AT LAW

William DeBorin, M.D.
6785 Medical Park Center
Suite 225
Capital City

Re: Marylin Harris vs. William DeBorin, M.D.
State Court File No. 92-Cir. 4284 (Medical Malpractice)

Dear Dr. DeBorin:

This is written to advise you that negotiations with your former patient, Marylin Harris, have been concluded. My apologies for not keeping you informed on the progress of this claim. As you are no doubt aware, your policy allows your malpractice carrier to settle claims without your advice or consent. It is our duty to inform you that a settlement has been reached between Marylin Harris and your professional liability insurance carrier in the amount of $458,000.

As required by federal law, a report will be made to the National Practitioner's Data Bank by your insurance carrier. This report will reflect the details of the case and the amount of settlement. Currently this information is available only to health care organizations and state licensing boards. However, pending legislation may require this report to be made available to the public. If you have any questions about this report, please contact your insurance carrier. We regret any inconvenience this report may cause.

I have enjoyed the many hours we spent preparing for your deposition last year. I look forward to seeing you again under happier circumstances.

Sincerely,

William B. Carter, Esquire
Riley, Thrumble, Hayes and Carter

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To reflect our growth, we have changed our name.

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They brought to our company a depth of management and medical expertise unmatched in the industry.

Our company has proactively changed over time. With strength, stability and an uncompromising commitment to quality, we have developed into the nation's largest, privately-owned, Medicare-certified home health care agency.

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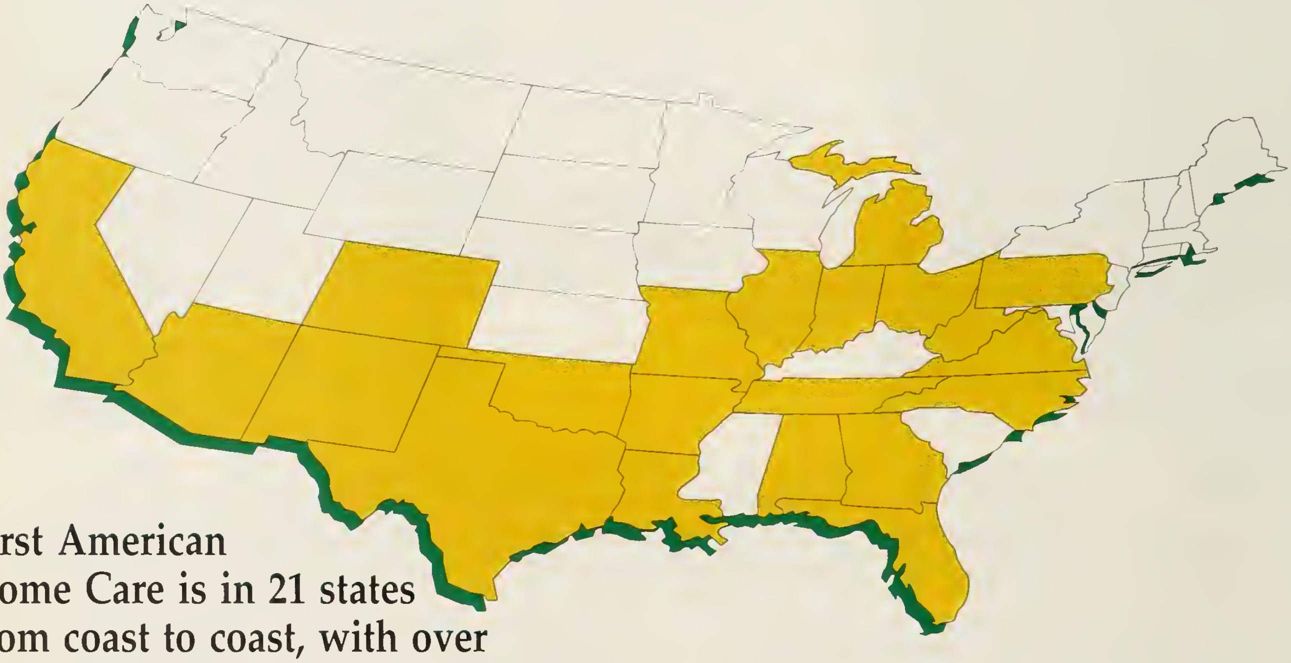

First American Home Care is in 21 states from coast to coast, with over 400 home health agencies and 13,000+ of the nation's most talented professionals.

First American offers the resources of a large, national firm. Yet, locally based and community focused, we make a difference in the lives of people across America as we continue to keep families together.

Now, stronger and more efficient than ever, we salute our employees. They have made us the industry leader that we are today. Poised for the 21st century, we will continue to provide the finest home health services available... anywhere.

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"Keeping Families Together"®

A Managed Care Specialist

Richard V. Bradley, MD, President MOMEDICO

Hermann Erianger, MD, was a managed care specialist in 1950 - *does that surprise you as a reader in 1995*? Dr. Erianger was a young specialist of internal medicine. He was also the attending physician for our group made up of eight junior medical students. Dr. Erianger set several very important rules for each of us:

1) **Listen to your patients.** Try not to interrupt until you are sure that they have had their say.
2) **Justify inpatient care** early in your write-up. If the needed care can reasonably be provided on an outpatient basis, initiate plans for discharge and outpatient care as soon as possible.
3) **Justify the need for any diagnostic tests** in your write-up. If you could not, then he would not approve the test.
4) **Double check on diagnostic procedures.** Do not order, then forget. It costs time.
5) **Keep your patients informed.** Tell them the plans for their care, why a test is being ordered, who the consultants are and why they were called in.
6) **Call or write the referring doctors at first opportunity.** They are interested in their patients. If they know that you also are interested, it will be appreciated.
7) **Keep your charting current.** (We did not write in the actual chart, rather we wrote on a color-coded insert that was graded by interns and residents.)
8) **Read up on each new case and diagnosis**. We were interrogated on rounds.
9) **Be neat about your dress and hygiene.** The patients will appreciate you more.
10) **Do not write any note when you are mad or angry.** You will always regret any use of the chart for such purpose.

I have had 45 years of admiration for Dr. Erianger because he truly believed in managing patient care. It was not a matter of economics then because ward bed rates were about $5 per day. It was of no less importance then, however, than is good intelligent cost conscious medical patient care today.

As physicians, we should be in control of the medical destiny of each patient as far as humanly possible. As physicians, we must resist the incursion of cost restraints if the sole purpose is economic and not medically cost-effective or efficient. ***Managed care must be effective patient care!*** MoMed

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Physician Practice Acquisitions and Mergers: Medical Practice Valuation

Tom Bennett, Executive Vice President, MSMS, Inc. and Edward G. Detwiler, ASA

"What is the real worth of my practice?"

This must be one of the most common questions that physicians are asking themselves given the current demand by hospitals, managed care organizations and insurance companies to purchase medical practices.

The process of valuing a practice for possible sale includes a review of the business fundamentals and valuation methodologies.

The key business fundamentals of a practice include:

- ■ Its market position;
- ■ Its regulatory position;
- ■ The quality of its operations;
- ■ The condition of the physical facilities.[1]

Market Position Analysis

Medical practices are driven by patient volume. Without a regular flow of patients the practice will cease to be a viable economic entity. Therefore, a practice must be assessed by its ability to attract and retain patients. This ability is influenced by the practice's marketing plan including its access to payers, the quality of its staff, the referral patterns into and out of the practice, and its relationship with area hospitals.

Some of the key indicators of the market position of the practice would include:

- Number of active patients;
- Number of new patients seen per month;
- Variances in number of total patient visits;
- Growth or decline in patient visits;
- Payor mix;
- Follow-up calls and letters to patients and referring physicians;
- Strength and weakness of referral sources.

Regulatory Position

It has become important to examine the effect of government regulations on the viability and financial condition of a practice. Regulations can have a profound impact on patient referrals, patient treatment patterns, revenues, cash flow and investment and business activities.

Some key items which will indicate the practice's regulatory status would include:

- ☐ Status of licenses;
- ☐ Local, state and federal inspections;
- ☐ Malpractice or other litigation;
- ☐ Local, state and federal regulatory climate;
- ☐ Reimbursement regulations and controls;[2]
- ☐ Stark II (self-referral).

Practice Operations

Without good business practices the ability to provide good patient care will be hampered. Without good cash flow and profit, the effectiveness and value of a practice will suffer.

The areas of operations that should be evaluated include:

- ▼ Quality of front office and reception;
- ▼ Quality of patient record keeping;
- ▼ Quality of patient appointment and scheduling;
- ▼ Quality of coding, billing and collections;
- ▼ Quality of accounting and financial operations;
- ▼ Quality of information systems that track, report and measure cost and quality.

Evaluation of Physical Facilities and Equipment

The areas of physical facilities and equipment are often the cause of much disagreement between seller and buyer, particularly when the facilities and equipment have not been upgraded or modernized for a number of years. The buyer will be forced to lower his estimate of the value of the practice when he

Continued on page 66

Continued from page 65

or she takes into account the cost of modernizing the physical plant and bringing it into compliance with state, local and federal regulations.

Physical facilities and equipment are vitally important in the practice's ability to:

- ❍ Attract and retain patients;
- ❍ Remain competitive with other local practices;
- ❍ Deliver patient care efficiently and effectively;
- ❍ Grow the practice through new services and programs

Evaluation of Financial Position

The review and analysis of the financial statement gives only a one-sided view of the viability and value of the practice. The financial statement must be read and interpreted within the context of the business as a whole, i.e. operations, marketing, government regulations, third party payers, penetration of managed care and physical facilities.

Items in the financial statements which can be used to project future cash flows are:

- Patient utilization by payor type;
- Net revenues and operating income of the practice;
- Operating expenses less extraordinary items;
- Capital needs for equipment and facilities improvement;
- Reserves for malpractice claims, contingent liabilities and taxes.[3]

The cash flow in a medical practice has both qualitative and quantitative characteristics, and the process of providing services to patients and receiving cash payments has become highly regulated and bureaucratic. Besides the amount in cash the practice generates it is also important to recognize the quality and the timing of cash generated by operations, which is contingent on the type of patients by payment category, the specific payers who provide reimbursement and the quality of the financial management.

Value

The "Fair Market Value" of an asset is the price at which a willing buyer and a willing seller, both informed of the relevant data about the asset, can reasonably conduct a transfer of an asset. Determining the fair market value of a practice would include the following elements:

Value of tangible assets:

- ■ real estate
- ■ fixtures
- ■ instruments
- ■ accounts receivable
- ■ furniture
- ■ equipment
- ■ inventories

Value of practice intangibles:

- ■ goodwill
- ■ quality of operations and systems
- ■ skills and experience of staff
- ■ reputation and experience of physician(s)
- ■ customer lists
- ■ referral network

It is important to note that the method of using depreciated value in appraising tangible assets greatly underestimates their real value. Depreciated values are generally the result of tax-motivated write-offs. The use of fair market value is a more accurate method. Likewise, when valuing accounts receivable, actual collection rates should be used, rather than averages by region and specialty.

Valuation Methodologies

In valuing a medical practice three methodologies are recommended:

- ■ Capitalized Earnings
- ■ Market Comparable Approach
- ■ Excess Earnings

Capitalized Earnings

This approach reflects the recent past and the anticipated future profitability of the practice. Through this method one ascertains the usual, and recent historical net earnings and capitalizes them at a rate of return that includes the Expected Rate of Return on Investment (ROI) minus a factor for Expected Growth in Net Earnings (Growth). This formula should read:

Value = Normal Net Earnings divided by ROI minus Growth

Value = Normal Net Earnings / (ROI - Growth)

Example:

Let Normal Net Earnings be 100,000

Let ROI be 25%

Let Expected Growth be 5%

Value = 100,000/(.25 - .05)

Therefore, Value = $500,000

Market Comparable Approach

With this methodology value is determined by a direct comparison of the practice to be sold with other practices that have been sold recently. This method requires knowledge of the price and other pertinent data regarding the other practices. However, this data is not easy to obtain due to reasons of confidentiality.

Excess Earnings Approach

This methodology adds the value of the intangible assets to the net value of the tangible assets. The value of the intangible assets is calculated by capitalizing those earnings in excess of the normal earnings for the medical specialty in that region as defined by the American Medical Association or Medical Group Management Association (MGMA). Typically a weighted average of 5 years of excess earnings is calculated.

In order to arrive at the capitalization of excess earnings a factor must be used that takes into account the risk associated with purchasing a privately held small business or medical practice. This factor is referred to as the "discount rate."

Example:

Let Excess earnings be 100,000
Let Discount Rate be 25%
Let Net Hard Asset Value be 75,000

Value = Excess Earnings/.25 +
Net Hard Asset Value

Value = 100,000/.25 + 75,000
Calculation: 400,000 + 75,000 = 475,000
Value of the practice is worth $475,000.

This method rewards those practices that are well managed, efficient and profitable.

IRS Approach

The Internal Revenue Service (IRS) published Revenue Rule (59-60) lists the factors that should be considered in a business valuation. Some of the factors are:

- Nature of business and its history;
- The economic outlook in general with specific reference to that industry;
- The earnings capacity of the company;
- The intangible value/goodwill of the company;
- The market price of corporations engaged in the same or similar line of business and whose shares are actively traded;
- The dividend-paying capacity of the company.

The above factors are relevant when valuing publicly traded corporations since there are many sources of public information that can be used to determine value. However the medical practice market is so unique, private and personal, that valuation techniques for publicly traded companies cannot be applied.

Finally, it must be clearly stated that hospitals, managed care companies and insurance companies are anxious to purchase medical practices in order to control all the inpatient and outpatient revenue streams associated with the practice.

As this article has demonstrated, valuing a medical practice is a difficult, complex and confusing process. Therefore, it is imperative that physicians desiring to sell their practices seek out certified appraisers, who are experienced and knowledgeable and who will conform to the Uniform Professional Appraisal Practice Standards required of the members of the American Society of Appraisers.

"Nothing can be of value without being an object of utility."

Karl Marx

Acknowledgement:

We wish to acknowledge Lewis Vollmar, MD, MBA, MA for his help with this paper.

References

1. *A Valuation Guide for Medical Practice Mergers and Acquisitions*, AMA, Chicago, 1994, p. 2.
2. *A Valuation Guide for Medical Practice Mergers and Acquisitions*, AMA, Chicago, 1994, p. 11.
3. *A Valuation Guide for Medical Practice Mergers and Acquisitions*, AMA, Chicago, 1994, p. 18.

Edward G. Detwiler, ASA, of Edward Detwiler and Associates, Schaumburg, IL, is an Accredited Senior Appraiser of the American Society of Appraisers and is an approved vendor of the MSMS, Inc.

If you need further information services from MSMS, Inc., please contact Tom Bennett at 314/842-4722.

Membership Notes

Steve M. Gnatz, MD

Steve M. Gnatz, MD, has been appointed Chair of the Department of Physical and Rehabilitation and the Medical Director of the H.A. Rusk Rehabilitation Center at the University of Missouri-Columbia. Dr. Gnatz is the PM & R Residency Program Director and Medical Director of the Back and Neck Rehabilitation Program. He remains active clinically in the areas of Musculoskeletal Medicine and EMG. Dr. Gnatz replaces **Henry Stonnington, MD,** who retired at the end of 1994 from the University of Missouri-Columbia.

William Peck, MD, executive vice chancellor for medical affairs & dean and professor of medicine at Washington University, received a five-year grant from the National Center for Research Resources for the General Clinical Research Center.

Susan Krechel, MD

Susan Krechel, MD, a pediatric anesthesiologist at MU, has developed a scale to assess pain in infants. This tool will help caregivers keep postoperative pain to a minimum while not overmedicating infants. An article introducing Dr. Krechel's research and was published in the January issue of *Paediatric Anaesthesia.* Each letter of the Dr. Krechel's scale represents a behavioral or physiological indicator of pain: CRIES (Crying-Requires Oxygen-Increased Vital Signs-Expression-Sleep). An infant's pain is measured on a cumulative scale of 0 to 10, with each indicator rated at 0, 1 or 2. A score of 4 indicates the need for medication. Dr. Krechel is also pioneering the use of intrathecal morphine to relieve post-operative pain in children.

Mary Alice Helikson, MD, assistant professor of general surgery at the University of Missouri-Columbia, was appointed to the program committee of the American Academy of Pediatrics' surgical section.

Constance Barone, MD, assistant professor of plastic surgery at the University of Missouri-Columbia, has been named senior editor for the plastice and reconstructive surgery section of the *Cranio-Maxillofacial Trauma Journal.*

David Jimenez, MD, assistant professor of neurological surgery at the University of Missouri-Columbia, has been named senior editor for the neurosurgery section of the *Cranio-Maxillofacial Trauma Journal.*

University of Missouri-Columbia faculty, **John J. Oro, MD**, associate professor and chief of neurosurgical surgery, and **Robert W. Gaines, MD**, professor of orthopedic surgery, have been named to the editorial board of *The International Medical Journal.*

Lucian V. Del Priore, MD, assistant professor of ophthalmology and visual sciences at Washington University, received a grant from the American Diabetes Association for a research project titled, "Growth Factor Release After Laser Photocoagulation of the Retinal Pigment Epithelium."

Missouri State Medical Association members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

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RESIDENTS

Edward W. Ferguson, MD - EM
Larry E. Seals, DO - OBG

Membership Notes

IN MEMORIAM

Merrill R. Bay, MD, 81, Blue Springs, Missouri, died December 12, 1994. Dr. Bay received his medical degree at the University of Iowa in 1939. He was on the medical staff at the Lake City Army Ammunition Plant from 1941 to 1945 and was medical director there from 1951 to 1975. Dr. Bay practiced general medicine in Blue Springs from the early 1940s until 1971. He was a medical consultant for the Missouri Vocational Rehabilitation Program. Dr. Bay was a member of the Jackson County Medical Society, the Missouri State Medical Association, the American Medical Association and the American Academy of Occupational Medicine. He was president of the medical staff of the Independence Regional Health Center and was a staff member of the Medical Center of Independence.

Walter G. Dukstein, MD, 64, Shawnee Mission, Kansas, died December 24, 1994. Dr. Dukstein received his medical degree at the University of Pittsburgh in 1956. He served as Lieutenant Commander in the U.S. Public Health Service, and taught at the Boston University School of Medicine. Dr. Dukstein moved to the Kansas City area in 1969. He was co-director of the Department of Nuclear Medicine at Research Medical Center and medical director of the Municipal Correctional Institution of Kansas City. He was also president of Mid-American Diagnostic Services, Inc. Dr. Dukstein was a member of the American Medical Association, the Southern Medical Association, Alpha Omega Alpha, the Society of Nuclear Physicians and the American Society of Clinical Pathology.

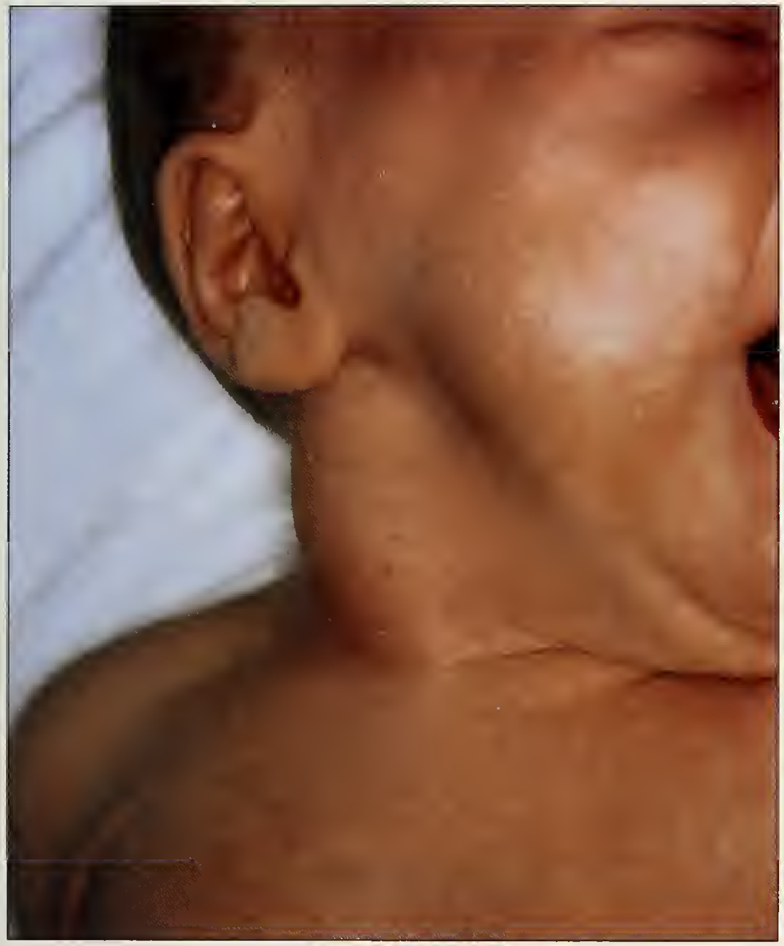
Wayne L. Rockwell, MD, 68, Mission Hills, Kansas, died October 2, 1994. Dr. Rockwell received his medical degree at the Western Reserve University School of Medicine in 1956. He practiced in the Kansas City area from 1960 until he retired in 1985. Dr. Rockwell was an associate professor for the department of gynecology and obstetrics and director of gynecological oncology at the KU Medical Center from 1965 to 1973. He was an instructor at the University of Arkansas Medical Center, Little Rock, in 1959-60. He had been a consultant at Whiteman Air Force Base, Knob Noster; Osawatomic (Kansas) State Hospital; Munson General Hospital, Fort Leavenworth, Kansas; and the Veterans Hospital, Kansas City. Dr. Rockwell received the Jayhawker M.D. award in 1965 and the Kansas Masonic Foundation award in 1973. He was a member of the American College of Ostetricians and Gynecologists and the American College of Surgeons.

Edith Robinson Schwartz, MD, 88, Richmond Heights, Missouri, died December 30, 1994, after a brief illness. Dr. Schwartz received her medical degree at John Hopkins Medical School in 1932. At the time, she was one of eight women medical students. In 1936, she moved to St. Louis with her husband, Henry G. Schwartz, MD, now a retired professor of neurosurgery at Washington University. Dr. Schwartz was assistant clinical professor of pediatrics at Washington University and St. Louis Children's Hospital. She became professor emeritus in 1988. She also worked in the Child Guidance Clinic at Washington University and in pediatric clinics in St. Louis and St. Louis County. She was the school doctor for the Ladue School District and Mary Institute.

Harry Stauffer, MD, 91, Jefferson City, Missouri, died November 15, 1994. Dr. Stauffer received his medical degree at Washington University Medical School in 1931. He served internship and residency at Kansas University Medical Center, Mercy Hospital, Kansas City, and Washington University, where he specialized in eye, ear, nose and throat medicine. He was inducted into the American College of Surgeons in 1944. During World War II he served in the U.S. Army medical corps and was certified in aerospace medicine. After the war, he became an FAA medical examiner. Dr. Stauffer was an associate professor of ophthalmology at Missouri University School of Medicine and operated a private practice as an eye surgeon in Jefferson City until his retirement in 1971. He was team doctor for the Jefferson City Jays football team, a member of the Cole County Medical Society, Missouri State Medical Association, American Medical Association and Missouri Ophthalmological Society, Inc.

Otolaryngology Quiz #1

by David Parsons, MD & Jerry Templer, MD
Division of Otolaryngology, University of Missouri - Columbia



This six-week-old infant, the product of a normal pregnancy, but difficult delivery, seemed to be normal until he developed a growing neck mass at two weeks of age. He has a good appetite and by all other parameters seems to be completely well except that he always maintains the pictured position of his head. On physical examination there is a firm nontender mass that seems to be within the sternocleidomastoid muscle. He resists passive turning of his head.

The diagnosis is:

- **a. Branchial cleft cyst**
- **b. Thyroglossal duct cyst**
- **c. Cervical lymphadenitis**
- **d. Congenital muscular torticollis**
- **e. Cervical rhabdomyosarcoma**

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER: d. Congenital muscular torticollis

Synonyms: Sternocleidomastoid tumor of infancy, Congenital torticollis, Wry neck.

Torticollis or "twisted neck" results from unilateral shortening of the sternocleidomastoid muscle (SCM). A mass typically appears within the SCM during the second and fourth week of life and grows for several weeks and regresses with treatment usually by eight months of age. In those that do not regress the muscle acts as a turnbuckle pulling the mastoid bone toward the sternum as the neck grows. Traction on the soft growing skull deforms the skull and face (plagiocephaly). The head is tilted toward the affected side and the chin rotates away from the lesion. Compensatory scoliosis of the spine reduces the head tilt.

The condition has been described for more than twenty centuries, but the cause is unknown. Histologically, the muscle is replaced by dense fibrous tissue. If not corrected these changes progress and become permanent. The diagnosis is made by the presence of these described findings. With daily active and passive exercise the muscle recovers in approximately 90% of instances. Even untreated many of these may resolve spontaneously.

Failure of therapy is manifested by continuing contracture and deformity after one year. Surgical sectioning of the muscle at either the superior or inferior attachments allows the neck to grow and the deformities tend to correct themselves as long as the patient grows. Numerous proposed etiologies such as infection or tearing of the muscle have been disproved. In utero malpositioning or kinking of the muscle causing a compartment syndrome are recent theories. The differential diagnosis include congenital masses such as branchial cleft cysts and cystic hygromas, cervical lymphadenitis or abscesses, and central nervous conditions causing head tilt.

References

1. Davids JR, Wenger DR, Mubarak SJ. Congenital Muscular torticollis, Sequela of Intrauterine or Perinatal Compartment Syndrome. *J Pedriatr Orth* 1993;13:141-147.
2. Tom LWG, Handler S, Wetmore RF, Potsic WP. The sternocleidomastoid muscle tumor of infancy. *Int J Pedriatr Otol* 1987;13:245-255.

TABLE 1. DIFFERENTIAL DIAGNOSIS

1. Branchial cleft cyst	**Mass anterior to SCM.**
2. Thyroglossal duct cyst	**Mass in or within few mm of midline.**
3. Cervical lymphadenitis	**Signs and symptoms of inflammation.**
4. Cervical rhabdomyosarcoma	**Expanding, nontender mass in muscle without contraction or restriction of head motion.**

Correction, January issue, pp 19 & 20:

Ophthalmology Quiz #12 - John C. Hagan III, MD

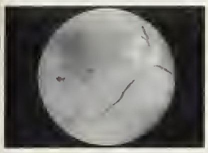


Figure 1

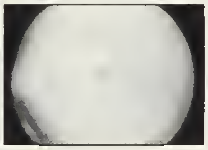


Figure 2

Fig.1 and Fig. 2 of the final Ophthalmology Quiz were switched.

Fig. 1 is a **retinal infarcation due to arterial emboli**. It shows a partial inferior retinal infarction. The infarcted retina is lighter in color due to swelling of the inner layers of the retina. The retinal artery emboli that caused the problem is visible as a bright, round spot at the 6 o'clock position on the edge of the optic nerve. These yellow-white plugs are called Hollenhorst plaues.

Fig. 2 is a **central retinal artery emboli with "cherry red spot."** If the entire retina is infarcted as in Fig. 2 due to a central retinal emboli after a few hours the typical "cherry red spot" is apparent. This is due to the fovea having a reddish appearance since it has a thin, attenuated inner layer and thus no swelling is present over it. A small area of normal, un-infarcted retina is visible immediately lateral to the optic nerve and is due to retained blood supply from an unobstructed cilio-retinal artery. This accounts for a small area of retained vision in the temporal visual field.

The St. Louis Gynecological Society

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TOPIC: **Current Issues in the Management of DES Exposed Patients - 1995**

SPEAKER: **Dr. Arthur L. Herbst**

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Nathaniel H. Murdock, MD
Barnes Hospital, West Pavilion
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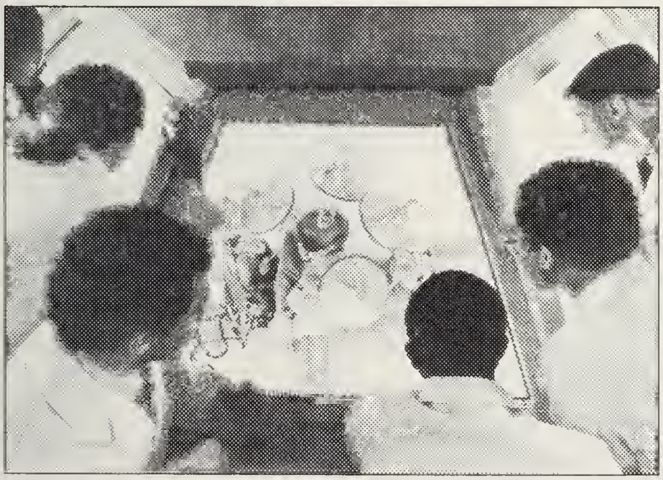

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The Board of Healing Arts Is Solving Problems Through Communication with Physicians

Angela M. Allen, Managing Editor

At the Annual Meeting of the Missouri State Medical Association last year, several resolutions were submitted to the House of Delegates concerning the Board of Registration for the Healing Arts. Some physicians felt harassed and intimidated by investigators. Others were frustrated with having to wait years to resolve issues due to a backlog of complaints. Physicians also requested more education regarding statutes and regulations governing their licenses.

The relationship between the Board and the physicians it licenses is improving. A change of board members and staff leadership is encouraging communication and response to physician comments. Guidelines are in the legislature to clear up confusion regarding prescribing to patients with intractable pain. And a new level of trust has been established between the Board and MSMA and MAOPS Physicians' Health Programs. (*See pages 77-79.*)

One forum for communication is a liaison committee of MSMA Councilors and Board members. "MSMA was aware of a general unhappiness by Missouri physicians. Anecdotal stories of harsh, rude investigators and stern interviewers were common. The liaison committee was reactivated and continues to function," said MSMA President H. Jerry Murrell, MD. "By establishing a forum for dialogue we have begun to understand each other's problems. The Board is less strident and more reasonable in their approach to disciplinary actions. Through publications of the Board and MSMA, physicians have gained a greater understanding of the mechanics of Board actions and of appropriate physician behavior when interacting. There are still occasional stories but there are far less now," Dr. Murrell said.

August W. Geise, MD, was elected as the Board's President in July 1994. Alden Henrickson also became Executive Director of the Board this past summer. "Board personnel has changed and turnover automatically brings different perspectives and ideas," said Dr. Geise. "This Board is going in a different direction. Previously the movement was toward discipline rather than education. The present Board tries to balance instances which can be covered by education, such as requiring special courses where a physician's knowledge is deficient. Disciplinary actions will only be used when necessary stringent measures are indicated."

Mr. Henrickson encountered similar regulatory agency problems as executive director of the Missouri Dental Board. He believes resolving problems hinges on open communication. "I encourage physicians to contact the Board office with any questions. We have a highly trained staff who will do everything they can to answer questions. We would rather avoid a situation than receive a complaint," he added.

There has been one request from licensees that the Board regrets they cannot change. "The Board received comments pertaining to the wording of its subpoenas

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which are stated in a court action format (*The Board of Healing Arts versus Dr.* ---). Physicians feel the language is threatening. We checked with our attorneys and the subpoena legal wording cannot be changed," added Mr. Henrickson.

The Board staff is working to resolve bad feelings physicians have had toward the organization. "Treating the licensee with respect is strongly emphasized. It is not new; we tell our investigators that they are not law enforcement and the licensee is not a perpetrator," said Mr. Henrickson. "It is important that physicians understand that staff offers no opinions of investigations. We leave the case to the Board, and they make the decisions," he added.

Sending subpoenas for medical records through the mail whenever possible is alleviating problems. "This is less confrontational and a physician can respond with a letter and records to provide us with a better understanding of the complaint," Mr. Henrickson said.

"A wide majority of physicians do a good job but anyone can receive a complaint. We try to recognize a true case from a complaint created by a disgruntled employee or because of a patient's bereavement," said Mr. Henrickson

"We have new processes for grievances. Complaints are screened for communication or administrative foul-ups. We then write letters to physicians for whom we have received complaints in order to obtain their side of the story. We try to handle a lot of cases with communication from the physician and the patient so that investigators can reserve their talents for legitimate cases," he added.

"I hope that physicians understand that we are all in this together. We all have the same mission - to ensure good medicine is being practiced and that the public is being protected," said Mr. Henrickson.

The Board is working hard to get a handle on its backlog of cases. "Considerable progress is being made resolving old cases," said Dr. Geise. "At the last board meeting we spent a tremendous amount of time and closed insignificant cases. We have also hired extra legal help outside the attorney general's office to get back on track," he added.

Mr. Henrickson feels that the Board works adequately and does a good job of resolving complaints as quickly as possible. "The Board has a tough job to do. Board members review approximately 5,000 pages of material for one board meeting. It is a very hands-on board which is in tune with the perception of the public and physicians," he said.

Changing for the better:

- **Encouraging physicians to contact the Board with questions and comments.**
- **Providing guidelines for prescribing to patients with chronic pain.**
- **Holding public hearings on Collaborative Practice Guidelines.**
- **Hiring extra legal assistance outside of the Attorney General's office to help with backlog of cases.**
- **Screening complaints to separate personal problems from serious cases.**
- **Avoiding confrontation in offices by sending subpoenas in the mail.**
- **Changing a question on license renewal form to avoid self-incrimination for impaired physicians.**
- **Finding agreement with MSMA and MAOPS Physicians' Health Programs.**

A major cause of disciplinary actions against physicians is the prescribing of controlled substances. Dr. Geise explains, "It is against the statute to prescribe to a known addict. On the other hand, how do you manage patients with chronic pain? Family practice physicians in small communities do not have access to sophisticated pain management centers of the urban communities. It was difficult for them to satisfy patients' needs and to comply to rules and regulations."

Continued from page 76

"I hope that physicians understand that we are all in this together. We all have the same mission - to ensure good medicine is being practiced and that the public is being protected," said Mr. Henrickson.

Continued from page 75

Additional guidelines for prescribing to patients with chronic pain were created by a combined effort of MSMA, MAOPS and the Board. The Intractable Pain Act has been submitted to this year's Legislative General Assembly (See January 1995 *Missouri Medicine*, 27-28).

"This legislative package will be a big help in laying down guidelines in order to successfully treat patients with chronic pain without invoking investigations," said Dr. Geise. "It should also eliminate the perception of the consumer that they will not be able to get treatment."

Physicians also need to be aware of their records of controlled substances. "There are a number of offices with lax office procedure at which the Bureau of Narcotics and Dangerous Drugs do not find records or any notation or record keeping. Physicians need to be reasonable. Education and introduction of legislation will pin down and tell physicians what the minimum requirements are to treat patients," said Dr. Geise.

One final issue currently involving the Board is the establishment of collaborative practice guidelines. Physician input is encouraged on this issue at scheduled public hearings *(See right >)*. MoMed

Collaborative Practice Guidelines

The Board of Healing Arts published proposed rules governing collaborative practice guidelines in the Fall 1994 issue of *Healing Arts News*. The rules were created by the Board of Healing Arts, Board of Nursing and Board of Pharmacy in accordance with HB 564 which passed the General Assembly in 1993. The rules have been placed in the *Missouri Register*.

The proposed rules cover:

Geographic areas in which the physician(s) shall be available for immediate consultation at all times, either personally of via telecommunications.

Methods of Treatment - Supervising physicians must be present one day every two weeks at the registered professional or advanced practice nurse's or physician assistant's office.

Physician assistants may only practice within the same speciality of their supervising physician.

Public Hearings Scheduled Regarding Proposed Rules Governing Collaborative Practice Arrangements Between Physicians and Nurses

The public is invited to comment and we are asking any interested physicians to attend and speak their mind.

February 18, Kansas City, at 1:00 p.m., in Room 101 of the Penn Valley Community College Science and Technology Building, 3201 Southwest Trafficway.

February 25, St. Louis, at 1:00 p.m., at the University of Missouri-St. Louis J.C. Penney Auditorium, 8001 Natural Bridge Road.

March 11, Kirksville, at 1:00 p.m., in the Days Inn Ballroom, on Highway 63 South.

March 18, Springfield, at 1:00 p.m., in the Hawthorne Ballroom, Sheraton Hawthorne Park Hotel, at 2431 North Glenstone.

Interested parties are also invited to submit written comment on the proposed rules to Alden Henrickson, Executive Director, Missouri Board of Healing Arts, P.O. Box 4, Jefferson City, MO 65102; Telephone: 314/751-0098 and Fax: 314/751-3166.

The Board and the MSMA Physicians Health Program Share Rehabilitation Goal for Impaired Physicians

It is the hope of the Board of Healing Arts and the MSMA Physicians' Health (MPH) Program that an era of distrust has come to an end. Through better communications the two organizations anticipate the accomplishment of their shared goal of helping impaired physicians.

"The Board has been involved for years with trying to rehabilitate doctors who are impaired. If the statistics are to be believed, 10% of physicians have an impairment problem. When compared to the number in treatment it means there are a lot of impaired physicians not seeking treatment," said August W. Geise, MD, President of the Board.

"In the past year the relationship with the MPH Program has not been as good as it could be. We had many meetings with the MSMA and MAOPS Programs to try and find ways to improve our relationship," said Dr. Geise.

"We can be responsible for consumer protection and be reasonable with the medical community," said Alden Henrickson, Executive Director of the Missouri Board. "By using probation, letters of concern and monitoring we will protect the consumer and maintain a valuable resource for the public."

The Board felt there was a lack of effective communication between them and the MPH Program. "The Board wanted better reports from the committee. We have been working very hard to improve upon this," said Jack Croughan, MD, Medical Director of the MPH Program.

The addition of Robert Bondurant, RN, LCSW, as program coordinator of the MPH Program has also improved the Board's perception of the program. "The MSMA Physicians' Health Program has changed personnel. There is a lot of experience in the program's leadership, and this has improved the level of trust significantly," said Dr. Geise.

As a result of communication by physicians a question on the physicians' license renewal form has been changed. "**Have you been chemically dependent or treated for chemical dependency?** put many physicians in a 'no win situation' believing they were forced to risk discipline for lying on their renewal application," said Dr. Geise. "The application was modified to ask, **Have you been diagnosed or treated for any mental or physical illness or condition that has hindered or might serve to hinder your ability to practice medicine?** to allow the physician not to self-incriminate."

The threat of losing a professional license may have hindered some potentially impaired physicians from getting help. "Anonymity must be protected because a rehabilitation program cannot exist without it," said Tom Anderson, MD, Chairman of the Advisory Committee for the MPH Program.

"The MSMA Physicians' Health Program has changed personnel. There is a lot of experience in the program's leadership, and this has improved the level of trust significantly," said Dr. Geise.

Along with the renewal form question change came an agreement between the Board and the MSMA. The Memorandum of Understanding (MOU) signed by the MSMA and the Board sets forth guidelines for communication. "The Board signed an agreement with MSMA and MAOPS Physicians' Health Programs based on a trust factor. The MOU comes from a desire on the part of all parties, the Board, MSMA and MAOPS, to provide a basis for a good working relationship," said Dr. Croughan.

The MOU provides an alternative for physicians who are already known by the Board to be impaired to get help. They may become a mandatory client of the MPH Program by signing a contract with the Board, in lieu of discipline. Impaired physicians not yet known by the Board may voluntarily join

Continued from page 78

Continued from page 77

the MPH Program and keep their identities unknown to the Board.

The Board receives a progress report on all participants in which the impaired physician is identified by code number only. “If there is a relapse or the committee feels the participant has become a problem, it is obligated to inform the Board,” said Dr. Geise.

“Referral in lieu of discipline is the ‘best of all possible worlds’,” said Dr. Croughan. “The participant maintains anonymity, and confidentiality is still strictly protected for participants who work a good recovery program.”

> *“It is apparent the Board is encouraging rehabilitation rather than discipline. There should be less fear and concern about joining the program,” said Bob Bondurant, Program Coordinator of the MPH Program.*

It is the feeling of the current Board that both physicians and consumers will benefit from education and rehabilitation rather than discipline. “We can be responsible for consumer protection and be reasonable with the medical community,” said Mr. Henrickson, Executive Director of the Missouri Board. “By using probation, letters of concern, and monitoring we will be able to protect the consumer and maintain a valuable resource for the public.”

“The support of the Board should encourage more participants to voluntarily enter the program. We also anticipate being more effective when appearing before the Board on behalf of physicians in the MPH Program,” said Dr. Croughan.

“The MOU allows the Board to mutually facilitate the recovery process,” said Dr. Croughan. He went on

The Memorandum of Understanding

The purpose of the Memorandum of Understanding is to develop a cooperative relationship between the MSMA Physician Health Program/MAOPS Physician Health Program and the Board of Healing Arts that will safeguard the public and provide the physician the opportunity to return to practice through a system of detection, early intervention, effective treatment and monitoring.

There are two types of clients created for the physician health program:

1) Mandatory: an individual who either enters an impairment program as a conditional requirement of his or her formal disciplinary agreement with the Board of Healing Arts or in lieu of possible formal disciplinary action by the Board. Mandatory participants are required to sign the program’s contract. If a participant fails to comply with any provision of the contract, the Executive Committee and/or the Program, will report the individual to the Board.

2) Voluntary: Any individual who decides to participate in impairment program either on his or her own or through referral. The identity of the participant is not known by the Board of Healing Arts and is only referred to by code number. If a voluntary participant fails to comply with any provisions of the contract, the Executive Committee and/or the Program, will report the individual by code number to the Board of Healing Arts.

An **Evaluation Report** that details the initial examination of the client includes the following information: the reason for referral to the Program (if applicable), clinical history and diagnosis, treatment, and aftercare plan and return to work recommendations.

A quarterly **Progress Report** provides a statement of compliance. If the client has experienced any form of noncompliance, including but not limited to, updated information on results of drug screenings, aftercare performance, monitoring meetings, AA/NA meetings and record of attendance, therapy, recommended revisions and any outside legal action will be provided.

Guidelines Specific to Mandated Clients

1) The Board agrees to provide to the Program a copy of the signed order for all mandated clients within 14 days of the date signed.
2) The Program agrees to provide the Board a copy of the signed impairment agreement for all mandated clients within 14 days of the date signed.
3) The Program agrees to provide to the Board a program evaluation report for all mandated clients within 14 days.
4) The Program agrees to provide the Board quarterly progress reports as specified.

to say "Care should be taken to note that there are two distinctly different levels of participation in our program. One is the mandated participant who is referred by the Board. Our assistance to this physician will involve close cooperation with the Board which permits us to function as team members in facilitating compliance with the Board's requirements for this individual. Equally important is the volunteer participant who has complete confidentiality from the Board and we advocate solely on behalf of the individual's needs. It is to be remembered that our responsibility, as the MSMA recovery program for Missouri licensed physicians, is to the individual, to assist and advocate for them. As such we are distinct and separate from the Board as is the MAOPS Program."

It is apparent the Board is encouraging rehabilitation rather than discipline. There should be less fear and concern about joining the program," said Bob Bondurant. "We also hope that those who are concerned about someone will feel more comfortable in dealing with him or her because they are not going to lose their license. Spouses, family members, peers, and administrators - those who see the impairment can feel better about contacting the program if they know it will make a positive improvement in the person's life, profession and future."

This agreement with the Board should also help the MPH Program to continue to increase its visibility to physicians. "We shall continue to increase our work with hospital administrations, medical staffs and liability carriers, to increase everyone's awareness of the potential value of this program to all parties" said Dr. Croughan. MoMed

The MSMA Physicians' Health Program offers confidential help for impaired Physicians.

24-hour Hotline: 1-800-274-0933

5) The Program agrees to notify the Board the next working day by telephone and to follow-up in writing no later than 14 days for either positive urine or blood tests. Failure to submit to screen, habitual absence (leaving the Program), substantiated complaints of relapse or other physical or mental indicators observed by the Program staff.
6) The Program agrees to have the Director or designee and the attorney (at the client's discretion) to accompany the client, to meetings of the Board should the Board have reason to believe the client is not complying with terms of the agreement.

Guidelines Specific to Voluntary Clients

1) The Program agrees to provide the Board by code number within 14 days of joining the Program, a Program Evaluation Report. When this is not possible, the Program agrees to provide a preliminary report within 14 days followed by a complete program evaluation within a reasonable period of time.
2) The Program agrees to provide the Board quarterly progress reports (including any noncompliance) by code number.
3) The Board may request and the Program may recommend that certain coded clients be revealed due to a pattern of noncompliance with the contract.
4) The Board agrees that when a voluntary client's name has been released by the Program due to a pattern of noncompliance with the contract, the Board will consult with the Director of the Program as to the patient's stability before initiating its investigation.

General Guidelines

The Program agrees to utilize comprehensive drug screenings when initially testing all clients whether mandatory or voluntary and will continue with the comprehensive tests if the results of the initial test are positive. If the results of the initial test are negative, it is agreed the Program will utilize the simpler test. It is also agreed that a client has a positive urine drug screen it will be followed initially by a comprehensive drug screen. If the screen is negative, the client will then be subject to the simpler test.

The Program agrees to provide the Board a directory of all hospitals and clinics utilized by the Program and to notify the Board when a hospital or clinic or other health facility is added or deleted. When the hospital or clinic or other health care facility is deleted the Program agrees to notify the Board in writing why the relationship was terminated.

Should such condition arise that might require or lead to discipline of that client's license, the Board agrees to take into consideration that client's participation and compliance in the program before final discipline is decided.

The Program agrees the Board reserves the right to evaluate the Program.

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Phone (______)_______________________________
Date of Birth ___________________________

Managing the Journey of Change: Assisting Communities in Assessing and Improving Community Health Status

Maureen E. Dempsey, MD, CHART, Physician Project Specialist
Missouri Department of Health

Changes in the health care delivery systems of Missouri and the nation will undoubtedly be a premier feature of the history of the late 20th century. While rising health care costs are the leading forces behind the movement toward revision of current systems, other issues such as increasing consumer dissatisfaction, inadequate access to care and uncertainty regarding the quality of care are not without significance. For many communities, the changes in the health care arena occur so rapidly that there is little time for preparation or response. In addition, the technology and terminology associated with new innovations in health care design and delivery vary greatly and change frequently. While communities desire to maintain local control of the change process, many lack the resources to grapple with issues such as health status assessment, quality improvement, health strategy development, monitoring and evaluation. With increasing frequency, communities in Missouri request technical assistance with managing the journey of change.

In response, the Missouri Department of Health and its statewide partners have collaborated to provide assistance to struggling communities. This collaboration resulted in the development of the Community Health Assessment Resource Team (CHART), whose mission is to improve the health of Missourians. CHART will assist communities in the assessment of their unique health needs and the development of community health strategies that are based upon that assessment. Such strategies will allow communities to shift the focus from responding to acute crises to creating systems that plan for health, promote healthy behaviors and provide services that are appropriate for their needs.

The attendant challenges that change represents to communities are currently the subject of significant discussion and debate and frequently, the etiology of discord between all of those who have a stake in the existing system. In effect, these challenges represent a dynamic process which promotes and encourages diversity and culminates in comprehensive organizational change. Daily, we witness the difficulties encountered in the lengthy process we call change, which is characterized by impressive gains and simultaneously fraught with a tremendous variety of setbacks. Within the health care arena, the challenges we face are epitomized by the dichotomy between health care as a

Continued on page 84

CHART Mission

CHART assists communities in:

- **Examining existing health services;**
- **Developing community health plans to meet health needs;**
- **Improving community health status;**
- **Developing effective links among local health care providers.**

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Guest Speaker

P. John Seward, MD

P. John Seward, MD, a family physician from Rockford, IL, is currently Chair of the AMA Board of Trustees and its Executive Committee and serves as a delegate to the World Medical Association. He served as an AMA commissioner to the Joint Commission of Accreditation of Healthcare Organizations (JCAHO) and as chair of the AMA Technical Advisory Committee on Health System Reform.

Dr. Seward received his medical degree in 1965 from the University of Illinois College of Medicine. He is a diplomate of the American Board of Family Practice and a fellow of the American Academy of Family Physicians. He is an active participant in the American Occupational Medical Association, and a trustee of the Interstate Post Graduate Medical Association.

Dr. Seward served as a member of the Board of Trustees and as president of the Illinois Medical Society. He is a past chair of the board of the SIDS Foundation, and a member of the Governor's Commission of Health Assistance. He has also served as the Winnebago County Coroner for 19 years.

Dr. Seward will address the House of Delegates during the Opening Session, Thursday, March 23; at the General Session, Friday, March 24; and will take part in the open forum "Discuss the Issues with Your AMA Delegate," Friday, March 24.

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LEADERSHIP THAT'S SECOND TO NONE

Continued from page 81

community product, delivered one patient at a time, and the complex issues of system reform on a broader scale.

The technical knowledge and skills are currently available for revamping existing systems. What is lacking is consensus between the key decision makers - providers, purchasers, and payers - on how to define and achieve common objectives, and the education and involvement of consumers at more than a nominal level. The complex policy issues of access, finance, quality and delivery of services must be balanced with the critical need for individual and communities to identify and address their local health care concerns.

While market forces will assure that key leaders continue to focus on change, consensus building and seeking solutions, little has been accomplished in the areas of consumer education and involvement. The current management philosophy of empowerment supports the community-based, community-owned process as a means of providing individuals the opportunity to maintain control of their own environment. Expanded citizen participation ensures the community's commitment to improving the health services and health status of their residents.

Because communities vary widely in composition, health risks and behaviors, system design and delivery; the assessment, intervention strategies and implementation must remain community focused. Community focus assures that local problems and data needs are identified and that proposed interventions are acceptable to the residents. Community commitment is the cornerstone of community development and progress. Progress will be witnessed by alterations in both personal and political philosophy, allowing the necessary changes in infrastructure to occur. The outcome will be substantial and sustainable revision of systems.

The Community Health Assessment Resource Team (CHART) Project was initiated to assist communities in assessing, identifying and addressing their health care needs. The project's mission is to improve the health of Missouri citizens through community empowerment and development. Empowerment will occur through expert technical assistance, which is organized around a comprehensive array of resources and skills and provided by a knowledgeable staff, with access to numerous consultants. To be effective, the technical assistance is available on a flexible basis, as needs arise, and provided in a manner that is both sensitive and responsive to individual community needs, desires and resources.

CHART is sponsored by the Missouri Department of Health, in partnership with several organizations and was designed to model effective collaboration. Members of the partnership include the Joint Committee on Health Care Policy and Planning (Missouri Legislature), the Missouri Alliance for Home Care, the Missouri State Medical Association, the Missouri Association of Osteopathic Physicians and Surgeons, the Missouri Chamber of Commerce, the Missouri Coalition for Primary Care, the Missouri Department of Mental Health, the Missouri Department of Social Services, the Missouri Hospital Association, the Missouri Nurses Association, the Partnership Council (local health units), the Transition Advisory Team (organizational change within the Department of Health), and the University of Missouri-Columbia Health Services Management Program. The partners meet regularly to generate project ideas and to provide assistance to the Project. In addition, they provide access to their respective memberships, which allows rapid dissemination of information, encouragement for participation in local community health improvement activities and statewide exposure. In return, the state level coalition receives valuable feedback regarding local educational, data and technical assistance requirements, as well as information on progress at the community level.

The core CHART staff consists of five professionals with varied skills, including the organization of health care delivery systems; program planning, development, administration and evaluation; fiscal analysis; data collection and analysis; quality improvement methods and the provision of primary health care services.

CHART has developed a model for community development that represent a gradual, organized approach toward the identification and implementation of effective community health strategies. This model stresses collaboration, coalition building, community health status assessment, prioritizing of health issues and the development and implementation of community health strategies that are locally designed and sustained. The Team provides a broad array of technical assistance to help communities achieve their goals. In addition to providing direct technical assistance, a series of five manuals were developed in collaboration with and funded by the Missouri Hospital Association, which provide detailed, step-by-step guidance for communities. They are specifically designed to be utilized by working coalitions who will be able to adapt the materials and methods to fit the needs and skills of their unique communities. The manuals contain specific goal-oriented information that is complemented by specifically designed tools, worksheets, and sample models from other successful programs, which can be tailored to fit the unique aspects of a variety of communities.

Coalition Building

Communities must have strong, effective leaders who are able to function in a collaborative manner. Leaders must believe that improvement is essential and thus, provide the catalyst for community assessment. Their support gains resources and provides motivation to sustain the project. Membership on the coalition must be broad, so that all key constituents are represented at the table, in order to garner broad-based support and assure ease of implementation. Constituents include all of the primary groups whose concerns must be voiced and addressed, including but not limited to consumers, advocates, providers, purchasers, and payers. One or more of the community leaders must assume the role of the community health facilitator. This role must be filled by an individual who will be able to remain objective, set agendas, moderate meetings, mediate conflicts and sustain the momentum of the local project. CHART technical assistance will include team building and organizational skills, defining leadership, identifying key constituents, defining roles and responsibilities of the key constituents, consensus-building skills, facilitation and conflict resolution.

Community Development/ Establishing a Foundation

Before a coalition begins to assess the needs of its community, it must define what is to be assessed. Definition of the community is not a formality, but an essential component that provides the basis for successful community health assessment. The process of defining the community results in the compilation of information regarding current availability of services, types of delivery systems, community needs, and opinions and the relationships between the key players or constituents. The sum of the compiled material provides the backdrop for future activities and the structure for monitoring and evaluation. CHART supports and encourages communities to define themselves. As all communities differ greatly, only those who are integral members of the community are qualified to provide that definition. For the purposes of the community health assessment project, the community may be defined as all of the individuals who share participation in the use of local health care resources. It then may be further defined by geographic or political boundaries, gender, health conditions or other concerns. CHART technical assistance will include conducting leadership workshops, developing organizational structure, establishing a shared vision, developing community education plans, barrier analysis and identification of preliminary goals.

Community Health Assessment

Strong coalitions who comprehensively define their communities must then develop a common vision, with mutually agreed upon goals. The vision becomes the foundation upon which communities begin to revise their health care systems to meet the needs of their residents. Such change must be guided by a detailed and in-depth assessment of community health status.

Assessment of health status is a multifaceted process that involves gathering community-specific data, tapping other data rich sources (such as state agencies and others who routinely collect and analyze data), identifying data gaps, conducting community surveys and performing a detailed analysis to identify barriers, as well as strengths, of the community.

Consolidation of this information and its analysis provides an inventory of community resources and identifies key health issues, of both present and future concern, which the community must address. CHART will provide technical assistance in the following areas: provision of health status assessment tools and models (with concomitant training in their use), assistance in gathering, compiling,

Continued on page 86

CHART

Community Health Assessment Resource Team

The partnership of statewide health and community-related agencies and organizations is built on three key principles:

1. **Partner collaboration and participation.**
2. **The development and availability of technical assistance for communities.**
3. **The provision of tools and resources for communities to use to build coalitions and improve community health.**

CREATING HEALTHY COMMUNITIES

Changing	To
Focus on Illness	☛ Focus on Wellness
Episodic Care	☛ Planned Health
Treatment Oriented	☛ Outcome Oriented
Cost Shifting	☛ Cost Sharing
Competitive Focus	☛ Collaborative Focus
Directed Consumer	☛ Participative Constituents
Institution Centered	☛ Community Centered

HEALTH ISSUES TO CONSIDER

- **Prevent Epidemics**
- **Protect the Environment, Workplaces, Housing, Food and Water**
- **Promote Healthy Behaviors**
- **Monitor the Health Status of the Population**
- **Mobilize Community Action for Health**
- **Prepare for Disaster Response**
- **Assure the Quality and Availability of Medical Care**
- **Provide Medical Services When and Where Needed**
- **Secure a Skilled Public Health Work Force**
- **Research for New Insights and Innovative Solutions**
- **Development of Sound Health Policy and Planning**

Continued from page 85

recording and analyzing data, identifying data gaps, identifying survey goals and provision of community survey tools, with tailoring of those tools to meet local needs.

Prioritizing Community Health Issues

Successful completion of the assessment phase of the project frequently identifies more than one health issue, delivery system problem or area of concern that the community feels impelled to act upon. The coalition must prioritize the issues identified based upon several factors that include current or potential impact upon the community, available resources, community perception of need and the likelihood of successful intervention. This is a critical and sensitive juncture of the community project, where the coalition must transform multiple proprietary interests, beliefs and perceptions into comprehensive and mutually agreed upon key health issues for the community. The coalition will utilize the prioritized list of concerns as a guide for all subsequent activities.

Communities may address one or several of the particular health issues identified, depending on the factors listed above. They may opt to group related issues and address them simultaneously or to focus upon several concerns, which while unrelated, require rapid intervention. In order to address the key health issues, they must have clearly identified goals and objectives that encompasses commitment of resources, desired impact of and time frame for interventions, and the ability to monitor and evaluate the changes. CHART will provide technical assistance in the areas of prioritizing concerns, mediating conflicts, developing specific goals and objectives, developing community-specific intervention strategies and determining appropriate outcome measures for monitoring and evaluation.

Development and Implementation of Community Health Strategies

Communities will face unique challenges in transforming the goals and objectives into comprehensive health strategies. Successful strategies will mobilize, organize and optimize resources. They will clearly define the roles and responsibilities of individuals or organizations who have committed to participate in the intervention process. In addition, they will assure effective coordination of activities, establish time frames and milestones, develop outcome measures and assure that all interventions are monitored and evaluated. This assurance will extend to periodic modification of the strategies, followed by reevaluation. CHART will assist by participating in the design of the monitoring and evaluation components for the community health strategy and by providing oversight for its implementation.

The CHART Project is an innovative approach to empowered community development. It provides communities the opportunity to participate in the process of change, with regard to health services and delivery systems. Commitment is assured when the community is empowered through education and the provision of necessary skills and tools, tailored to the unique needs of the community and provided at the local level. Armed with appropriate knowledge and sills, communities can begin to focus upon health status assessment and the development of locally designed, implemented and monitored community health strategies. It is readily apparent that this process is both time consuming and labor intensive, however, positively impacting the health status of communities is worth the cost and worthy of commitment. The obvious benefit will be communities that have planned for health, promoted healthy behaviors and provided services that are accessible and appropriate for their needs. As we move relentlessly toward the new century, perhaps we will be able to document the success of innovative, collaborative relationships that resulted in sustainable redesign of systems and a healthier Missouri.

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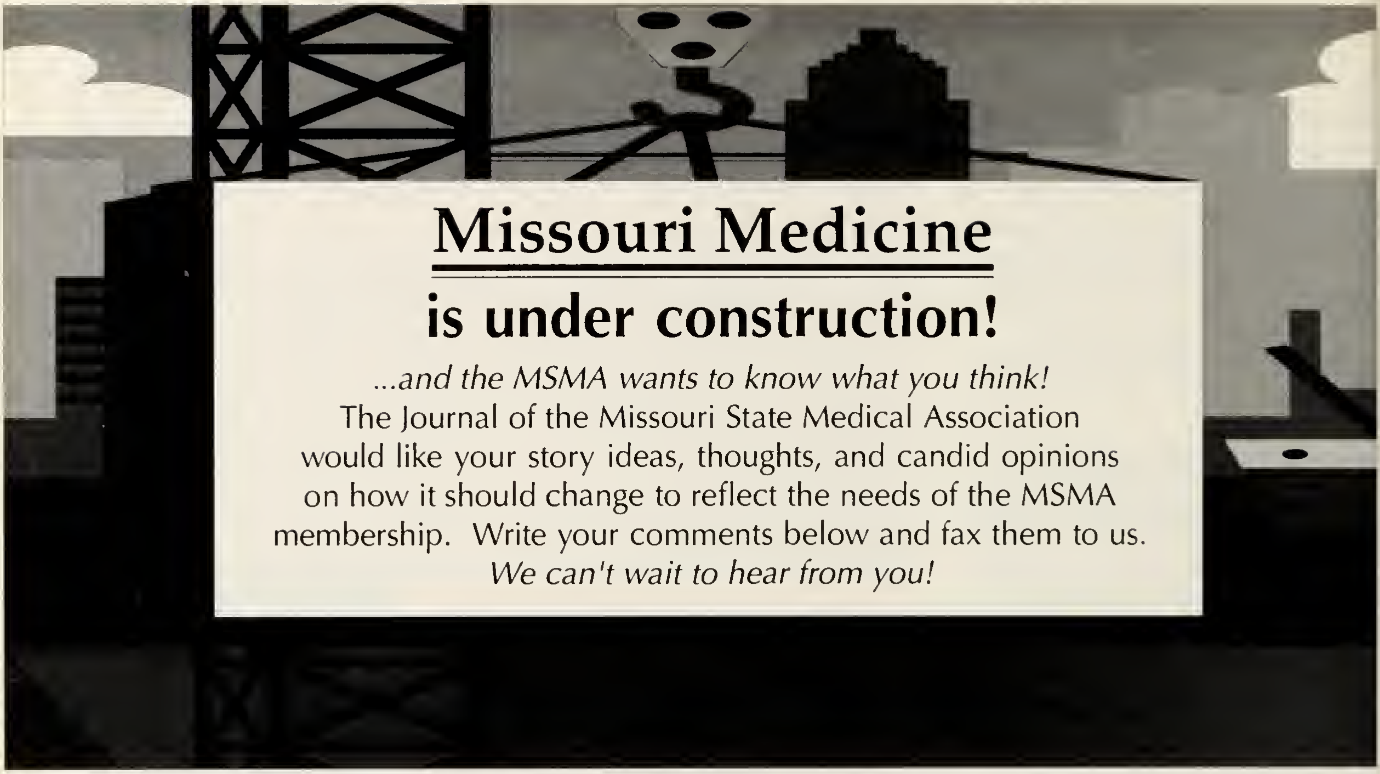

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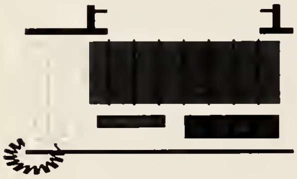

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De Novo Malignancy After Renal Transplantation

Mark W. Smith, MD, Sharon K. Rose, MSN, RN, Sunder M. Lal, MD, Gilbert Ross, Jr., MD

We reviewed the incidence of de novo malignancy in renal transplant recipients who received their grafts between 1979 and 1989, and had at least two years of graft function.

Multiple attempts were made to contact 236 patients who were then surviving, or, in whom the medical history could be validated prior to death.

There were 94 successful contacts, among whom 19 patients (20.12%) had developed 30 malignant lesions. There were 24 instances of skin and 6 of non-skin malignancy. Squamous cell carcinoma of the skin was the most common new malignancy observed.

The Authors

Mark W. Smith, MD, and **Gilbert Ross, Jr., MD,** are with the Division of Urology, University of Missouri-Columbia School of Medicine. **Sunder M. Lal, MD,** is with the Division of Nephrology, University of Missouri-Columbia School of Medicine. **Sharon K. Rose, MSN, RN,** is a Transplant Clinical Nurse Specialist with University of Missouri Hospital and Clinics.

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The immunosuppressive agents required for the maintenance of heart, liver, and kidney allografts impose an increased risk of malignancy on the recipient.[1-2]

In this context, we reviewed the incidence of de novo malignancy in patients who received renal transplants at University Hospital between 1979 and 1989.

Materials and Methods

During the 10-year period reviewed, there were 293 transplants. Only patients with at least a 2-year functioning graft survival were included to establish at least a minimal exposure to immunosuppression. The data were obtained by a telephone questionnaire developed to inquire about many health related issues, including cancer, prior to or following renal transplantation. Multiple attempts were made to contact the recipients between the months of June and August of 1992. We obtained appropriate pathology reports to confirm the patients' histories of malignancy.

Results

At the time of the survey, there were 236 patients who were surviving, or in whom the medical history prior to death could be validated. Ninety-four verified contacts, representing 40% of the entire sample, were obtained. Among these 94 patients, there were 63 males and 31 females. The mean age was 38.19 years, with a range of 8-67 years. Nineteen patients had developed de novo malignancy, an incidence of 20.21%. These patients were slightly older than the entire sample, averaging 48.8 years with a range of 28-67 years.

The immunosuppressive regimens were representative of the time period during which the transplants were performed. Nineteen patients received Azathioprine and steroids, 12 received Cyclosporine, Monoclonal antibody was used in one patient, and Polyclonal antibody was used for induction or the treatment of rejection in 4.

Among the 19 patients, there were 30 instances of de novo malignancy (counting each patient with skin cancer only once, in spite of recurrences) (Fig. 1). These malignancies occurred as a single histological lesion in 11 patients (58%), and in various combinations in 8 patients (42%). Collectively, among the 94 patients, squamous cell carcinoma occurred in 14 patients (12 male, 2 female; 15%); basal cell carcinoma in 7 patients (5 male, 2 female; 7.5%); melanoma in 3 males (3.19%); lymphoma in 3 males (3.19%); adenocarcinoma in 2 males (2.13%); and small cell carcinoma of the lung in 1 male (1.06%).

Among the 11 patients with a single histologic lesion, squamous cell carcinoma occurred in 7, basal cell carcinoma in 3, and adenocarcinoma arising in a transplanted kidney, noted at autopsy after death from an acute myocardial infarction, in 1 patient. Of the 19 patients who developed de novo malignancy, 5 patients (26%) had two distinctive histologic lesions in the following combinations: squamous cell carcinoma and renal cell adenocarcinoma (1 patient), squamous cell carcinoma and small cell carcinoma of the lung (1), lymphoma and melanoma (1), and squamous cell carcinoma and basal cell carcinoma (2). Three lesions were found in 3 of the 19 patients (16%); these included squamous cell carcinoma, basal cell carcinoma and lymphoma (2 patients); and squamous cell carcinoma, basal cell carcinoma and melanoma (1 patient).

A number of benign tumors were also noted. Ten patients had actinic keratoses, 9 associated with squamous cell carcinoma. Other benign lesions included a squamous cell papilloma of the palate, tubular adenoma of a sigmoid polyp and a parotid adenoma.

The average time to detection of these malignant lesions ranged from 39-100 months depending on cell type (Fig. 2).

The time to recurrence of skin lesions varied from 8-19 months. Squamous cell carcinoma (SCC)

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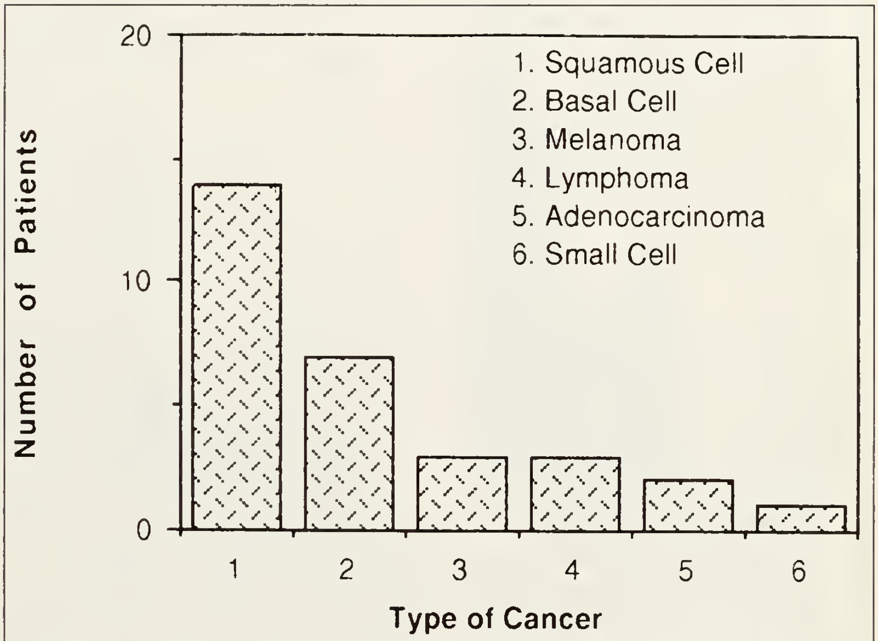

Figure 1. De novo carcinoma in the University of Missouri-Columbia renal transplant population.

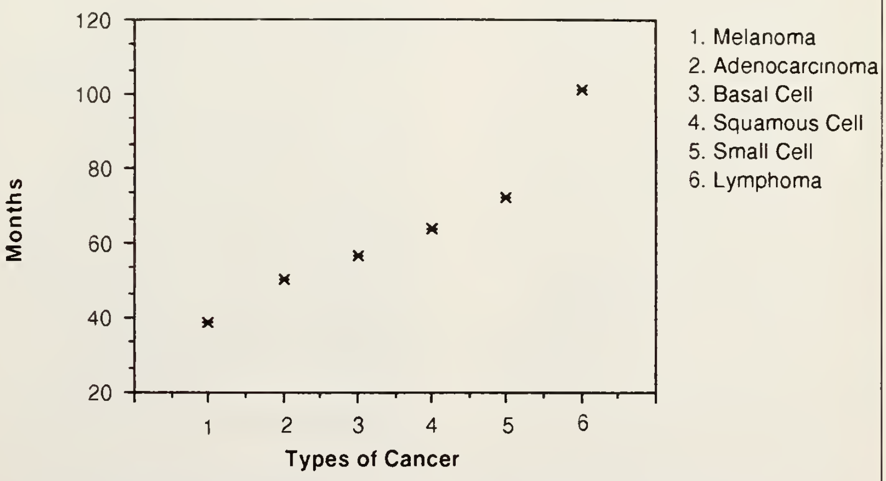

Figure 2. Time from transplant to detection of carcinoma.

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recurred in 12 of the 14, and basal cell carcinoma (BCC) in 3 of the 7 patients. SCC recurred at an average of 8 months (range 1-43 months), and BCC in 19 months (range 2-40 months) (Fig. 3).

At the time of the survey, 5 patients had succumbed to metastatic disease from squamous cell carcinoma, metastatic melanoma, small cell of the lung metastatic to the lumbar vertebrae, disseminated lymphoma, and metastatic adenocarcinoma, probably of renal cell origin to the cervical vertebrae.

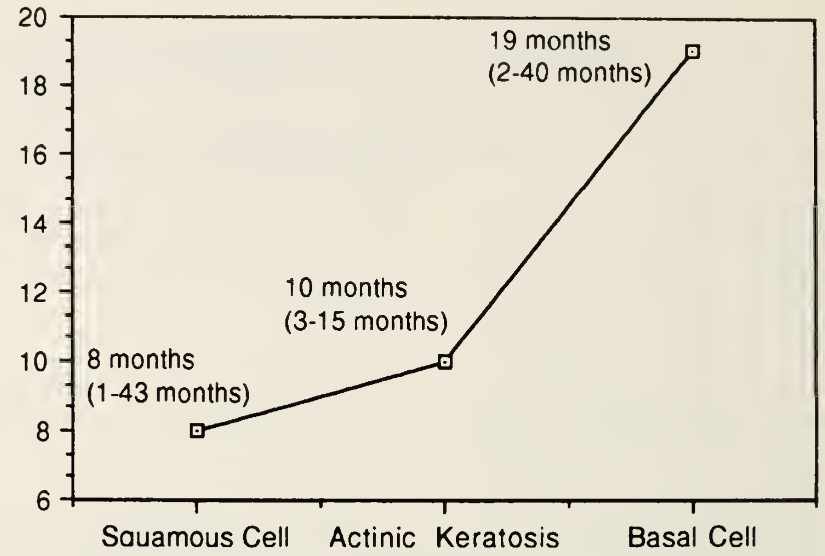

Figure 3. Average time of reappearance of lesions after removal.

Discussion

The incidence of de novo malignancy in our transplant population was 20.21%. This is compatible with other multi-institutional studies.[3]

Squamous cell carcinoma of the skin was the most common new malignancy and occurred in a 2:1 ratio relative to BCC. This is quite different than noted in the general population where BCC has a nearly 5:1 incidence relative to SCC. Our 22% incidence of skin cancer closely approximates the pooled Australian and New Zealand experience. In over 5,000 transplants followed for up to 24 years, skin cancer developed in 20% of patients. Seventy percent were squamous cell carcinomas. These authors also reported a 6% incidence of non-skin malignancy involving a number of different organ systems. In patients who had functioning grafts for 20 years or longer, non-skin malignancies occurred in 27% and skin malignancy in an astounding 66%.[4] The incidence of non-skin malignancy in our study was 6.3% including lymphomas, adenocarcinomas, both probably or renal origin, and small cell carcinoma of the lung. The relative incidence of these malignancies was 3190, 2130, and 1600 per 100,000 respectively for lymphoma, adenocarcinoma of kidney, and small cell carcinoma of the lung. When compared to the frequency of these malignancies in the general population, a 180-, 245-, and 28-fold increase respectively was noted in our study population.[5,6] The increased frequency of genitourinary tumors and lymphomas in immunosuppressed transplant patients is attested to by the literature, particularly in the case of lymphoproliferative disorders when a viral etiology has been inferred.[7] Although our data are compatible with the literature, the small numbers of non-skin malignancy limit drawing any statistical conclusions.

While we did not have a random non-transplant control group to compare the incidence of skin cancer, a number of well controlled studies have been conducted in the past to approximate the occurrence of skin cancer in various portions of the United States. The incidence of squamous cell carcinoma per 100,000 varied from 175 in the Dallas/Ft. Worth area, to 60 in Iowa, 47 in Minneapolis/St. Paul, 60 in San Francisco/Oakland, for an average of 85.5. Basal cell carcinoma had an incidence of 599, 192, 268, and 315 for the same locations respectively, with an average of 343.5.[8] The incidence of melanoma throughout the United States in 1993 was 10.7 per 100,000 not greatly different than that reported in the state of Missouri (Fig. 4).[9-10]

Our estimate of the incidence of skin cancer is based on total exposure time after transplantation. The 14 cases of SCC had a total exposure time of 113.4 years, the BCC group 116.65 years, and the melanoma group 129.99 years. These yield an estimated per year incidence of .1234 years for SCC, .0601 for BCC, and .023 for melanoma. Extrapolating to report the results per 100,000, the incidence would then be 1234 for SCC, 6010 for BCC, and 2300 for melanoma. This represents 144-, 17-, 215-fold increases in the incidence of SCC, BCC and melanoma respectively when compared to average national figures. The 95% confidence interval for our respective incidence was .067 to .196 for SCC, .023 to .120 for BCC and .0046 to .057 for melanoma (Fig. 5).

The time from transplantation to the detection of a malignancy averaged 63.83 months in our study. Detection time hinges primarily on the emergence of skin lesions which are generally assumed to be related to the amount of ultraviolet exposure, either chronically, or in the case of melanoma, acute and intermittently.[11] The study of Liddington and associates related the emergence of skin cancer in renal transplant recipients to the degree of latitude and by inference to the amount of ultraviolet exposure.[12] The high incidence of skin cancer in transplant recipients is believed to be related in part to the frequent occurrence of human papilloma virus in various pre-malignant and malignant skin lesions, acting in concert with such carcinogenic factors as UV exposure and immunosuppression.[13] The age at the time of transplantation also remains a significant risk factor when an adjustment is made for UV exposure. The 60-year-old is more than three times as likely to develop SCC than the 30-year-old.[14]

Squamous cell carcinoma in the immunocompromised renal transplant patient tends to be aggressive and, in our series, led to death in 1 patient (6.5%), with a collective 2.13% mortality rate from skin cancer among the 94 patients. Three of the six patients with a non-skin malignancy also succumbed to the disease. We did not see early lymphoproliferative disorders in our patients with renal grafts. Occasional occurrences of early lymphoproliferative disorders have been reported elsewhere and ascribed to immunosuppression with monoclonal or polyclonal antibody and/or Epstein-Barr viral infection particularly, in patients

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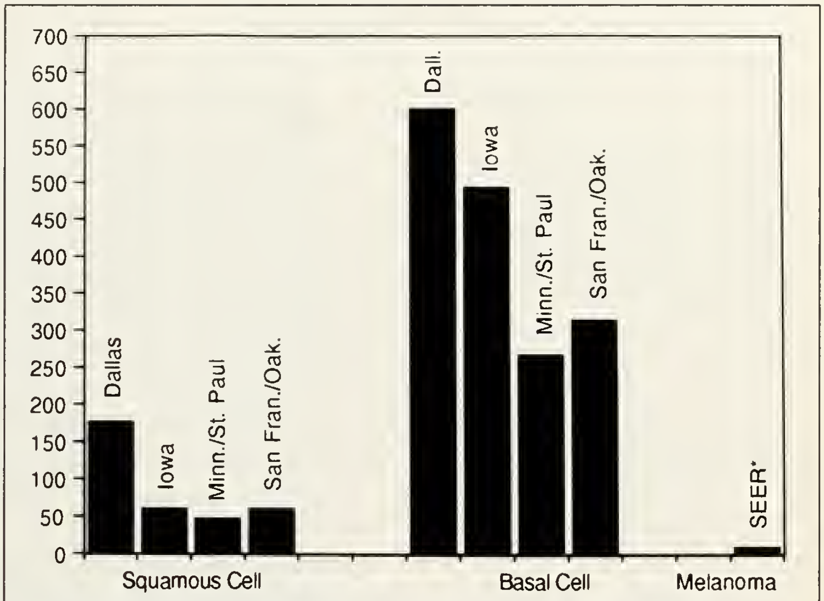

Figure 4. Incidence of skin cancer, 1971-1972. (Surveillance, Epidemiology, and End Results data, National Cancer Institute.)

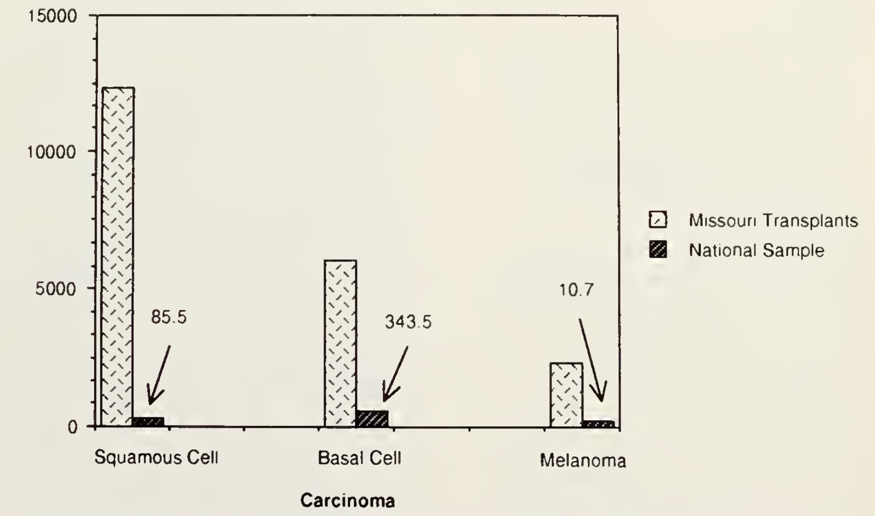

Figure 5. Skin cancer in University of Missouri transplants versus a random national sample.

Continued from page 93

with non-renal grafts.[15] Two of our lymphoma patients had localized disease which responded to local therapy and reduction, or cessation in immunosuppression; one progressed and died of widely disseminated disease 10 years after the transplant.

Conclusion

This study further demonstrates the increased incidence of cancer, particularly skin cancer in transplant patients. The immunosuppressed renal transplant recipient must be particularly cautious of exposure either chronically, or acutely and severely, to ultraviolet light. Such patients need to be warned about the increased risk of skin cancer as well as other malignancies, and appropriate surveillance protocols instituted. When patients begin therapy for end stage renal disease, and are segregated out as potential transplant recipients, this pattern of UV avoidance should be initiated. There are a number of potential strategies to deal with the patient whose skin has suffered actinic damage. Such patients are well advised to avoid all unnecessary exposure to ultraviolet light, or if it is necessary, to ameliorate the impact by the use of a sunscreen. While the actual impact of sunscreens in lowering the incidence of skin cancer is unproven, there is at least enough strong inferential evidence that their use should be strongly encouraged.

Acknowledgement

The authors gratefully acknowledge the work of Richard Madsen, PhD, Department of Statistics, University of Missouri-Columbia, in performing the statistical analysis for this manuscript. We also appreciate Philip C. Anderson, MD, Division of Dermatology, University of Missouri-Columbia Hospital and Clinics, for reviewing the manuscript.

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Osteochondroma of the Scapula

Joseph F. Galate, MD, J. Mark Blue, MD and Robert W. Gaines, MD

Osteochondromas are common primary bone tumors which are usually located in the distal femur. In a large retrospective study from the Mayo clinic, osteochondromas comprised 36% of benign bone tumors and nearly 10% of all bone tumors. While the scapula is rarely involved, this is the most common tumor of the scapula.

Clinical signs of this lesion include shoulder pain and limited range of motion. Patients may present with winging of the scapula. Computed tomography is often necessary to fully define the location and character of the lesion.

We present the case of a 14-year-old girl with pain and limited range of motion of the left shoulder. The diagnosis was that of osteochondroma of the scapula.

Osteochondromas, also known as exostoses, are developmental aberrations rather than true neoplasms. Osteochondromas are the result of misdirected epiphyseal bone growth resulting in the production of cartilage-capped bony projections from the lateral contours of endochondral bones.

Dahlin and Unni reviewed 8,542 patients with bone tumors at the Mayo Clinic.[1] In their findings, 1822 (21%) of the primary tumors were osteogenic in nature. Osteochondromas comprised 35.8% of benign bone tumors and 8.5% of all bone tumors. Their location is usually metaphyseal and 90% occur in the distal femur, or the tibia or humerus. These areas represent the most actively growing ends of the long bones. Occasionally, the pelvis, scapula, and ribs are involved. Osteochondromas rarely occur in the small bones of the hands and feet.

Case Presentation

A 14-year-old white girl presented with a 2-month history of left scapular and subscapular pain with motion of the left shoulder and arm. On physical exam, there was pseudowinging of the left scapula along with scapular snapping with internal rotation and abduction of her left arm. The patient was unable to elevate her left elbow above her shoulder. The remainder of the physical exam was unremarkable. Anterior-posterior and left lateral oblique radiographs showed a 3 × 2 cm mass on the medial border of the left scapula (Fig. 1 and 2).

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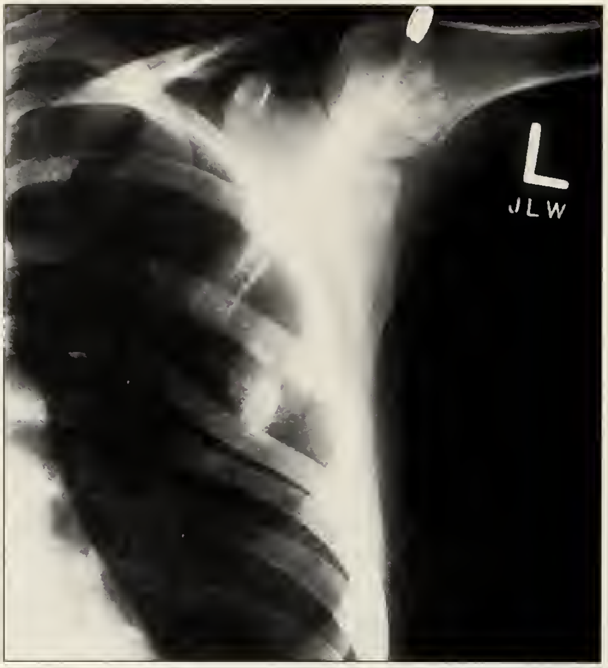
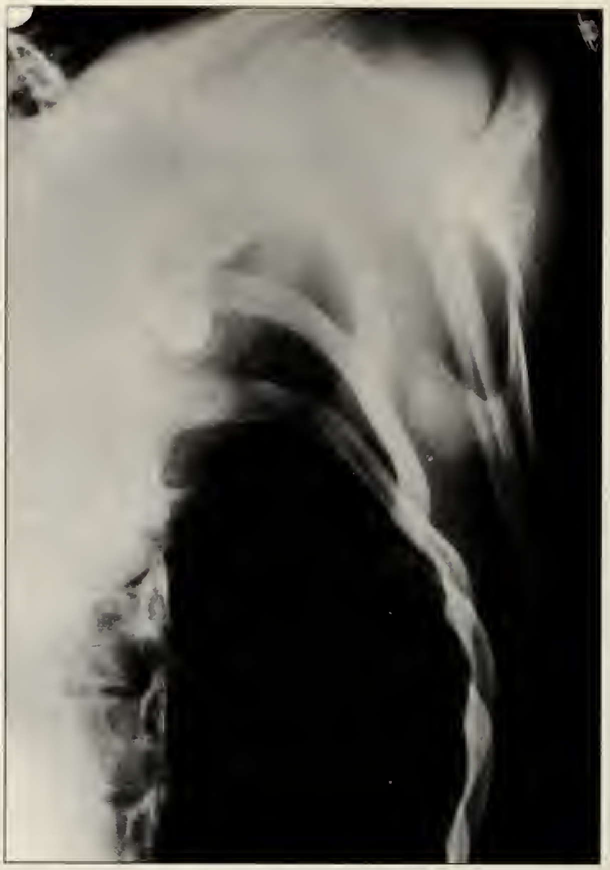


(Above) Figure 1. A-P view of chest showing the lesion on the left scapula.



(Right) Figure 2. Left lateral oblique view of the left scapula showing two dimensional configuration of the osteochondroma.

Surgical Procedure

At surgery, a 3 × 2 × 1.5 cm mass (Fig. 3 and 4) was excised through a paravertebral incision near the left scapula border. Histological evaluation confirmed the specimen to be an osteochondroma.

The patient's convalescence period was uncomplicated and she was discharged from the hospital 2 days later. On follow-up examination, the patient no longer demonstrated signs of pseudowinging, she had full range of motion of her arm and scapula without pain and had complete resolution of preoperative symptoms.

Discussion

Osteochondroma represents the most common primary tumor of the scapula with an incidence of 4.6%. Whether solitary (88%) or multiple (12%) (Dahlin, 1986), osteochondromas are rarely discovered before late childhood or adolescence. Osteochondromas of the scapula usually occur on the anterior surface and cause symptoms similar to our reported case.[2]

The patients usually present with the chief complaint of pain and a grating sound with movement of the scapula originating from the scapulothoracic articulation. The patient or family member may notice pseudowinging of the affected scapula along with a decreased range of shoulder motion.[3,4]

An exostosis may be localized by internally rotating the shoulder joint to produce grating or snapping. Audible crepitus may be produced with active abduction and internal rotation of the shoulder and arm. Anterior-posterior radiography may not always delineate the subscapular osteochondroma, so an oblique X-ray or CT scan occasionally is necessary to demonstrate the mass. If a patient exhibits winging of the scapula, other etiologies such as deformity of the superior angle of the scapula and palsies of the serratus anterior muscle must be ruled out.

The treatment of osteochondroma of the scapula is surgical removal. Every effort should be made to maintain the scapular contour. Surgical indications include lesions which are cosmetically disfiguring, symptomatic, multiple in number, and those suspicious of malignancy.

The prognosis of benign osteochondroma is excellent. Most patients regain full range of motion of their shoulder and arm without pain or snapping. Malignant degeneration, usually chondrosarcoma, occurs in approximately 3% of solitary osteochondroma in adult life. In patients with multiple hereditary osteochondromas (Ollier's disease), 27% will develop malignant transformation.

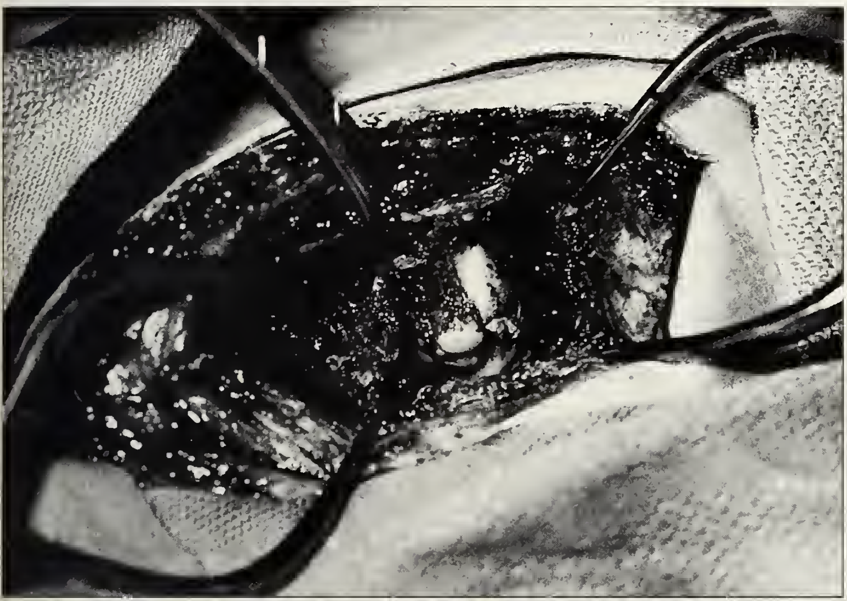


Figure 3. Intraoperative view of the osteochondroma attached to the anterior surface of the left scapula.

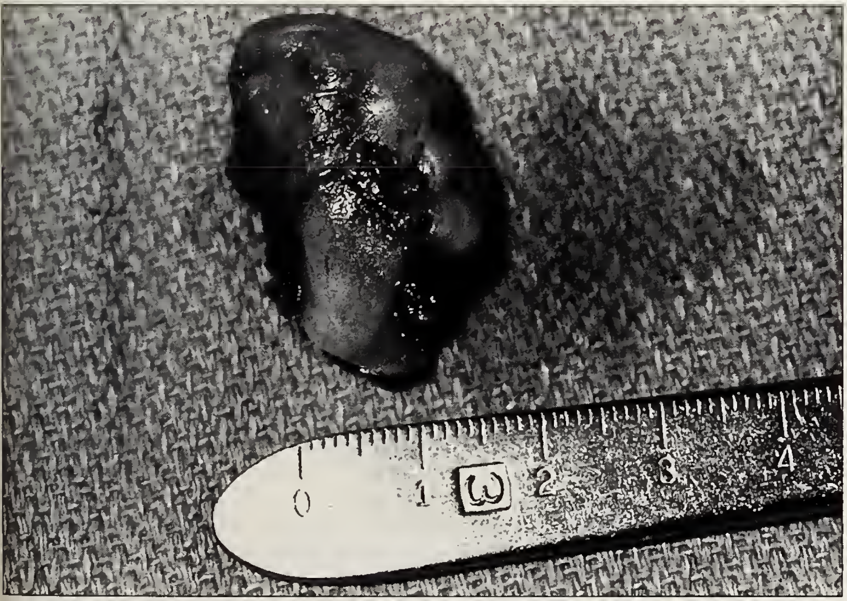


Figure 4. Postoperative view of the osteochondroma measuring 3 × 2 × 1.5 cm.

Summary

Although its occurrence is rare, osteochondroma is the most common tumor of the scapula.[5] Dahlin and Unni showed the incidence of scapular osteochondroma to be 4.6% of all osteochondromas. Osteochondroma usually presents on the anterior surface of the scapula producing symptoms of pain, snapping with motion, and pseudowinging. Scapular prominence may be caused by palsy of the serratus anterior muscle, or other neurological complications such as brachial plexus syndrome.[6] The treatment consists of surgical removal of the tumor to include the entire cartilage cap to prevent recurrence. The prognosis following surgical removal is excellent. Malignant transformation is rare except in cases of multiple exostoses.

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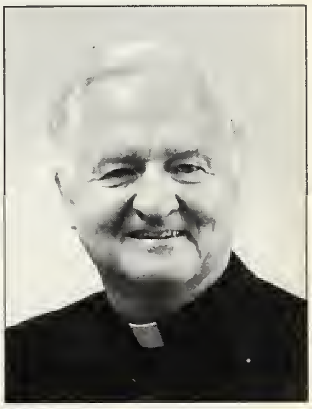

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
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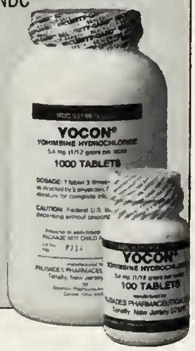

Historical Record

100 Years Ago

A paper presented at the 38th Annual Meeting of the Missouri State Medical Association held in the opera house, Hannibal, Missouri, May 21, 1895.

Some Surgical Sins ***(excerpt)***
By Emory Lanphear, MD, PhD, St. Louis, Missouri

Second Sin - DELAYING OPINIONS AS TO THE GRAVITY OF A DISEASE.

This applies particularly to cases which the attending physician knows full well tend to be fatal termination if not subjected to early operation; yet he hesitates to tell the patient the character of the disease and the necessity for surgical treatment - waiting, tinkering, giving medicine, encouraging the patient with false hopes - hopes, he knows, based upon bubbles thin as air; but still waiting, ever waiting - for what, God alone knows. I never have been able to fathom such men, to determine why they temporize, too often until too late. One would think them few, but this is not true. Such men are numerous - I meet them quite frequently. Only a few months ago a physician brought me a case of cancer of the uterus from the Indian Territory, far advanced, stinking, yet still operable. He was well informed, a graduate of one our best colleges; had treated the case for some months, recognizing the malignancy all the time. Yet he begged me not to tell the patient what was the trouble. He had informed her that a simple little operation would have to be performed for her "ulceration of the womb" - a "simple, little operation;" hysterectomy! Well I told her of her condition and of the prospects with and without operation, and let her decide. She submitted gracefully, and was sent home in three weeks relieved of present danger, possibly cured. The doctor was in an agony of indignation for a time, but regained his equanimity when the patient did not denounce him for his deceit, and he forgave me for my frankness, on account of the prompt recovery of his patient. Such little episodes are not all uncommon. They are met chiefly in connection with (1) uterine fibromata, (2) cancer of the uterus, (3) cancer of the breast, (4) amputations - for septic wounds, osteomyelitis, tuberculosis, etc., (5) appendicitis, and (6) opening of purulent accumlations as (a) empyema, (b) psoas abscess, (c) cold abscesses of the neck, (d) pus in the joints, etc. I might dwell much longer upon this topic, but - *verbum sat sapienti.*

50 Years Ago

From the January 1945 issue of the Journal.

THE JOURNAL is beginning a new year with several changes in its make-up. It is hoped that members will approve the change in the cover and placing of advertising through more of THE JOURNAL as is done by practically all current publications.

(The average issue in 1945 ran 52 pages of advertising in a 72-page journal.)

In connection with the recent announcement that the Army is no longer recruiting physicians, the following figures are of interest: The Army Medical Department has grown from 8,010 at the beginning of World War I until it now number 680,891. Of this number approximately 44,651 are in the Medical Corps, 14,948 in the Dental Corps, 2,012 in the Veterinary Corps, 2,364 in the Sanitary Corps, 15,078 in the Medical Administrative Corps, 59 in the Pharmacy Corps, 40,304 in the Army Nursing Corps, and there are 559,327 enlisted men, 813 Physical Therapy Aides, and 1,334 Hospital Dietians.

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Brief Summary (For full Prescribing Information, see Package Insert.)

INDICATIONS AND USAGE

Voltaren Delayed-Release or Cataflam Immediate-Release Tablets are indicated for the acute and chronic treatment of signs and symptoms of rheumatoid arthritis, osteoarthritis, and ankylosing spondylitis. Only Cataflam is indicated for the management of pain and primary dysmenorrhea, when prompt pain relief is desired, because it is formulated to provide earlier plasma concentrations of diclofenac (see CLINICAL PHARMACOLOGY, Pharmacokinetics and Clinical Studies).

CONTRAINDICATIONS

Diclofenac in either formulation, Voltaren or Cataflam, is contraindicated in patients with hypersensitivity to diclofenac. Diclofenac should not be given to patients who have experienced asthma, urticaria, or other allergic-type reactions after taking aspirin or other NSAIDs. Severe, rarely fatal, anaphylactic-like reactions to diclofenac have been reported in such patients.

WARNINGS

Gastrointestinal Effects

Peptic ulceration and gastrointestinal bleeding have been reported in patients receiving diclofenac. Physicians and patients should therefore remain alert for ulceration and bleeding in patients treated chronically with diclofenac even in the absence of previous G.I. tract symptoms. It is recommended that patients be maintained on the lowest dose of diclofenac possible, consistent with achieving a satisfactory therapeutic response.

Risk of G.I. Ulcerations, Bleeding, and Perforation with NSAID Therapy: Serious gastrointestinal toxicity such as bleeding, ulceration, and perforation can occur at any time, with or without warning symptoms, in patients treated chronically with NSAID therapy. Although minor upper gastrointestinal problems, such as dyspepsia, are common, usually developing early in therapy, physicians should remain alert for ulceration and bleeding in patients treated chronically with NSAIDs even in the absence of previous G.I. tract symptoms. In patients observed in clinical trials of several months to 2 years' duration, symptomatic upper G.I. ulcers, gross bleeding, or perforation appear to occur in approximately 1% of patients for 3-6 months, and in about 2%-4% of patients treated for 1 year. Physicians should inform patients about the signs and/or symptoms of serious G.I. toxicity and what steps to take if they occur.

Studies to date have not identified any subset of patients not at risk of developing peptic ulceration and bleeding. Except for a prior history of serious G.I. events and other risk factors known to be associated with peptic ulcer disease, such as alcoholism, smoking, etc., no risk factors (e.g., age, sex) have been associated with increased risk. Elderly or debilitated patients seem to tolerate ulceration or bleeding less well than other individuals, and most spontaneous reports of fatal G.I. events are in this population. Studies to date are inconclusive concerning the relative risk of various NSAIDs in causing such reactions. High doses of any NSAID probably carry a greater risk of these reactions, although controlled clinical trials showing this do not exist in most cases. In considering the use of relatively large doses (within the recommended dosage range), sufficient benefit should be anticipated to offset the potential increased risk of G.I. toxicity.

Hepatic Effects

As with other NSAIDs, elevations of one or more liver tests may occur during diclofenac therapy. These laboratory abnormalities may progress, may remain unchanged, or may be transient with continued therapy. Borderline elevations (i.e., less than 3 times the ULN [=the Upper Limit of the Normal range]), or greater elevations of transaminases occurred in about 15% of diclofenac-treated patients. Of the hepatic enzymes, ALT (SGPT) is the one recommended for the monitoring of liver injury.

In clinical trials, meaningful elevations (i.e., more than 3 times the ULN) of AST (SGOT) (ALT was not measured in all studies) occurred in about 2% of approximately 5700 patients at some time during Voltaren treatment. In a large, open, controlled trial, meaningful elevations of ALT and/or AST occurred in about 4% of 3700 patients treated for 2-6 months, including marked elevations (i.e., more than 8 times the ULN) in about 1% of the 3700 patients. In that open-label study, a higher incidence of borderline (less than 3 times the ULN), moderate (3-8 times the ULN), and marked (>8 times the ULN) elevations of ALT or AST was observed in patients receiving diclofenac when compared to other NSAIDs. Transaminase elevations were seen more frequently in patients with osteoarthritis than in those with rheumatoid arthritis (see ADVERSE REACTIONS).

In addition to the enzyme elevations seen in clinical trials, rare cases of severe hepatic reactions, including jaundice and fatal fulminant hepatitis, have been reported.

Physicians should measure transaminases periodically in patients receiving long-term therapy with diclofenac, because severe hepatotoxicity may develop without a prodrome of distinguishing symptoms. The optimum times for making the first and subsequent transaminase measurements are not known. In the largest U.S. trial (open-label) that involved 3700 patients monitored first at 8 weeks and 1200 patients monitored again at 24 weeks, almost all meaningful elevations in transaminases were detected before patients became symptomatic. In 42 of the 51 patients in all trials who developed marked transaminase elevations, abnormal tests occurred during the first 2 months of therapy with diclofenac. Based on this experience, if diclofenac is used chronically, the first transaminase measurement should be made no later than 8 weeks after the start of diclofenac treatment. As with other NSAIDs, if abnormal liver tests persist or worsen, if clinical signs and/or symptoms consistent with liver disease develop, or if systemic manifestations occur (e.g., eosinophilia, rash, etc.), diclofenac should be discontinued.

To minimize the possibility that hepatic injury will become severe between transaminase measurements, physicians should inform patients of the warning signs and symptoms of hepatotoxicity (e.g., nausea, fatigue, lethargy, pruritus, jaundice, right upper quadrant tenderness, and "flu-like" symptoms), and the appropriate action patients should take if these signs and symptoms appear.

PRECAUTIONS

General

Allergic Reactions: As with other NSAIDs, allergic reactions including anaphylaxis have been reported with diclofenac. Specific allergic manifestations consisting of swelling of eyelids, lips, pharynx, and larynx, urticaria; asthma, and bronchospasm, sometimes with a concomitant fall in blood pressure (severe at times) have been observed in clinical trials and/or the marketing experience with diclofenac. Anaphylaxis has rarely been reported from foreign sources; in U.S. clinical trials with diclofenac in over 6000 patients, 1 case of anaphylaxis was reported. In controlled clinical trials, allergic reactions have been observed at an incidence of 0.5%. These reactions can occur without prior exposure to the drug.

Fluid Retention and Edema: Fluid retention and edema have been observed in some patients taking diclofenac. Therefore, as with other NSAIDs, diclofenac should be used with caution in patients with a history of cardiac decompensation, hypertension, or other conditions predisposing to fluid retention.

Renal Effects: As a class, NSAIDs have been associated with renal papillary necrosis and other abnormal renal pathology in long-term administration to animals. In oral diclofenac studies in animals, some evidence of renal toxicity was noted. Isolated incidents of papillary necrosis were observed in a few animals at high doses (20-120 mg/kg) in several baboon subacute studies. In patients treated with diclofenac, rare cases of interstitial nephritis and papillary necrosis have been reported (see ADVERSE REACTIONS).

A second form of renal toxicity, generally associated with NSAIDs, is seen in patients with conditions leading to a reduction in renal blood flow or blood volume, where renal prostaglandins have a supportive role in the maintenance of renal perfusion. In these patients, administration of an NSAID results in a dose-dependent decrease in prostaglandin synthesis and, secondarily, in a reduction of renal blood flow, which may precipitate overt renal failure. Patients at greatest risk of this reaction are those with impaired renal function, heart failure, liver dysfunction, those taking diuretics, and the elderly. Discontinuation of NSAID therapy is typically followed by recovery to the pretreatment state.

Cases of significant renal failure in patients receiving diclofenac have been reported from marketing experience, but were not observed in over 4000 patients in clinical trials during which serum creatinine and BUN values were followed serially. There were only 11 patients (0.3%) whose serum creatinine and concurrent serum BUN values were greater than 2.0 mg/dL and 40 mg/dL, respectively, while on diclofenac (mean rise in the 11 patients: creatinine 2.3 mg/dL and BUN 28.4 mg/dL).

Since diclofenac metabolites are eliminated primarily by the kidneys, patients with significantly impaired renal function should be more closely monitored than subjects with normal renal function.

Porphyria: The use of diclofenac in patients with hepatic porphyria should be avoided. To date, 1 patient has been described in whom diclofenac probably triggered a clinical attack of porphyria. The postulated mechanism, demonstrated in rats, for causing such attacks by diclofenac, as well as some other NSAIDs, is through stimulation of the porphyrin precursor delta-aminolevulinic acid (ALA).

Information for Patients

Diclofenac, like other drugs of its class, is not free of side effects. The side effects of these drugs can cause discomfort and, rarely, there are more serious side effects, such as gastrointestinal bleeding, and more rarely, liver toxicity (see WARNINGS, Hepatic Effects), which may result in hospitalization and even fatal outcomes.

NSAIDs are often essential agents in the management of arthritis and have a major role in the management of pain, but they also may be commonly employed for conditions that are less serious.

Physicians may wish to discuss with their patients the potential risks (see WARNINGS, PRECAUTIONS, and ADVERSE REACTIONS) and likely benefits of NSAID treatment, particularly when the drugs are used for less serious conditions where treatment without NSAIDs may represent an acceptable alternative to both the patient and physician.

Laboratory Tests

Because serious G.I. tract ulceration and bleeding can occur without warning symptoms, physicians should follow chronically treated patients for the signs and symptoms of ulceration and bleeding and should inform them of the importance of this follow-up (see WARNINGS, *Risk of G.I. Ulcerations, Bleeding, and Perforation with NSAID Therapy*). If diclofenac is used chronically, patients should also be instructed to report any signs and symptoms that might be due to hepatotoxicity of diclofenac; these symptoms may become evident between visits when periodic liver laboratory tests are performed (see WARNINGS, Hepatic Effects).

Drug Interactions

Aspirin: Concomitant administration of diclofenac and aspirin is not recommended because diclofenac is displaced from its binding sites during the concomitant administration of aspirin, resulting in lower plasma concentrations, peak plasma levels, and AUC values.

Anticoagulants: While studies have not shown diclofenac to interact with anticoagulants of the warfarin type, caution should be exercised, nonetheless, since interactions have been seen with other NSAIDs. Because prostaglandins play an important role in hemostasis, and NSAIDs affect platelet function as well, concurrent therapy with all NSAIDs, including diclofenac, and warfarin requires close monitoring of patients to be certain that no change in their anticoagulant dosage is required.

Digoxin, Methotrexate, Cyclosporine: Diclofenac, like other NSAIDs, may affect renal prostaglandins and increase the toxicity of certain drugs. Ingestion of diclofenac may increase serum concentrations of digoxin and methotrexate and increase cyclosporine's nephrotoxicity. Patients who begin taking diclofenac or who increase their diclofenac dose or any other NSAID while taking digoxin, methotrexate, or cyclosporine may develop toxicity characteristics for these drugs. They should be observed closely, particularly if renal function is impaired. In the case of digoxin, serum levels should be monitored.

Lithium: Diclofenac decreases lithium renal clearance and increases lithium plasma levels. In patients taking diclofenac and lithium concomitantly, lithium toxicity may develop.

Oral Hypoglycemics: Diclofenac does not alter glucose metabolism in normal subjects nor does it alter the effects of oral hypoglycemic agents. There are rare reports, however, from marketing experiences of changes in effects of insulin or oral hypoglycemic agents in the presence of diclofenac that necessitated changes in the doses of such agents. Both hypo- and hyperglycemic effects have been reported. A direct causal relationship has not been established, but physicians should consider the possibility that diclofenac may alter a diabetic patient's response to insulin or oral hypoglycemic agents.

Diuretics: Diclofenac and other NSAIDs can inhibit the activity of diuretics. Concomitant treatment with potassium-sparing diuretics may be associated with increased serum potassium levels.

Other Drugs: In small groups of patients (7-10/interaction study), the concomitant administration of azathioprine, gold, chloroquine, D-penicillamine, prednisolone, doxycycline, or digitoxin did not significantly affect the peak levels and AUC values of diclofenac.

Protein Binding

In vitro, diclofenac interferes minimally or not at all with the protein binding of salicylic acid (20% decrease in binding), tolbutamide, prednisolone (10% decrease in binding), or warfarin. Benzylpenicillin, ampicillin, oxacillin, chlortetracycline, doxycycline, cephalothin, erythromycin, and sulfamethoxazole have no influence in vitro on the protein binding of diclofenac in human serum.

Drug/Laboratory Test Interactions

Effect on Blood Coagulation: Diclofenac increases platelet aggregation time but does not affect bleeding time, plasma thrombin clotting time, plasma fibrinogen, or factors V and VII to XII. Statistically significant changes in prothrombin and partial thromboplastin times have been reported in normal volunteers. The mean changes were observed to be less than 1 second in both instances, however, and are unlikely to be clinically important. Diclofenac is a prostaglandin synthetase inhibitor, however, and all drugs that inhibit prostaglandin synthesis interfere with platelet function to some degree; therefore, patients who may be adversely affected by such an action should be carefully observed.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term carcinogenicity studies in rats given diclofenac sodium up to 2 mg/kg/day or (12 mg/m²/day approximately the human dose) have revealed no significant increases in tumor incidence. There was a slight increase in benign mammary fibroadenomas in mid-dose-treated (0.5 mg/kg/day or 3 mg/m²/day) female rats (high-dose females had excessive mortality), but the increase was not significant for this common rat tumor. A 2-year carcinogenicity study conducted in mice employing diclofenac sodium at doses up to 0.3 mg/kg/day (0.9 mg/m²/day) in males and 1 mg/kg/day (3 mg/m²/day) in females did not reveal any oncogenic potential. Diclofenac sodium did not show mutagenic activity in in vitro point mutation assays in mammalian (mouse lymphoma) and microbial (yeast, Ames) test systems and was nonmutagenic in several mammalian in vitro and in vivo tests, including dominant lethal and male germinal epithelial chromosomal studies in mice, and nucleus anomaly and chromosomal aberration studies in Chinese hamsters. Diclofenac sodium administered to male and female rats at 4 mg/kg/day (24 mg/m²/day) did not affect fertility.

Teratogenic Effects

There are no adequate and well-controlled studies in pregnant women. Diclofenac should be used during pregnancy only if the benefits to the mother justify the potential risk to the fetus.

Pregnancy Category B: Reproduction studies have been performed in mice given diclofenac sodium (up to 20 mg/kg/day or 60 mg/m²/day) and in rats and rabbits given diclofenac sodium (up to 10 mg/kg/day or 60 mg/m²/day for rats, and 80 mg/m²/day for rabbits), and have revealed no evidence of teratogenicity despite the induction of maternal toxicity and fetal toxicity. In rats, maternally toxic doses were associated with dystocia, prolonged gestation, reduced fetal weights and growth, and reduced fetal survival. Diclofenac has been shown to cross the placental barrier in mice and rats.

Labor and Delivery

The effects of diclofenac on labor and delivery in pregnant women are unknown. Because of the known effects of prostaglandin-inhibiting drugs on the fetal cardiovascular system (closure of ductus arteriosus), use of diclofenac during late pregnancy should be avoided and, as with other nonsteroidal anti-inflammatory drugs, it is possible that diclofenac may inhibit uterine contraction.

Nursing Mothers

Diclofenac has been found in the milk of nursing mothers. As with other drugs that are excreted in milk, diclofenac is not recommended for use in nursing women.

Pediatric Use

Safety and effectiveness of diclofenac in children have not been established.

Geriatric Use

Of the more than 6000 patients treated with diclofenac in U.S. trials, 31% were older than 65 years of age. No overall difference was observed between efficacy, adverse event or pharmacokinetic profiles of older and younger patients. As with any NSAID, the elderly are likely to tolerate adverse reactions less well than younger patients.

ADVERSE REACTIONS

Adverse reaction information is derived from blinded, controlled and open-label clinical trials, as well as worldwide marketing experience. In the description below, rates of more common events represent clinical study results; rarer events are derived principally from marketing experience and publications, and accurate rate estimates are generally not possible.

In a 6-month, double-blind trial comparing Voltaren Delayed-Release Tablets (N=197) vs. Cataflam Immediate-Release Tablets (N=196) vs. ibuprofen (N=197), adverse reactions were similar in nature and frequency. In 718 patients treated for shorter periods, i.e., 2 weeks or less, with *Cataflam Immediate-Release Tablets*, adverse reactions were reported one-half to one-tenth as frequently as by patients treated for longer periods.

The incidence of common adverse reactions (greater than 1%) is based upon controlled clinical trials in 1543 patients treated up to 13 weeks with *Voltaren Delayed-Release Tablets*. By far the most common adverse effects were gastrointestinal symptoms, most of them minor, occurring in about 20%, and leading to discontinuation in about 3%, of patients. Peptic ulcer or G.I. bleeding occurred in clinical trials in 0.6% (95% confidence interval: 0.2% to 1%) of approximately 1800 patients during their first 3 months of diclofenac treatment and in 1.6% (95% confidence interval: 0.8% to 2.4%) of approximately 800 patients followed for 1 year.

Gastrointestinal symptoms were followed in frequency by central nervous system side effects such as headache (7%) and dizziness (3%).

Meaningful (exceeding 3 times the Upper Limit of Normal) elevations of ALT (SGPT) or AST (SGOT) occurred at an overall rate of approximately 2% during the first 2 months of Voltaren treatment. Unlike aspirin-related elevations, which occur more frequently in patients with rheumatoid arthritis, these elevations were more frequently observed in patients with osteoarthritis (2.6%) than in patients with rheumatoid arthritis (0.7%). Marked elevations (exceeding 8 times the ULN) were seen in 1% of patients treated for 2-6 months (see WARNINGS, Hepatic Effects).

The following adverse reactions were reported in patients treated with diclofenac.

Incidence Greater Than 1% - Causal Relationship Probable: (All derived from clinical trials.)

Body as a Whole: Abdominal pain or cramps,* headache,* fluid retention, abdominal distention.

Digestive: Diarrhea,* indigestion,* nausea,* constipation,* flatulence, liver test abnormalities,* PUB, i.e., peptic ulcer, with or without bleeding and/or perforation, or bleeding without ulcer (see above and also WARNINGS).

Nervous System: Dizziness.

Skin and Appendages: Rash, pruritus.

Special Senses: Tinnitus.

*Incidence, 3% to 9% (incidence of unmarked reactions is 1%-3%)

Incidence Less Than 1% - Causal Relationship Probable: (The following reactions have been reported in patients taking diclofenac under circumstances that do not permit a clear attribution of the reaction to diclofenac. These reactions are being included as alerting information to physicians. Adverse reactions reported only in *worldwide marketing experience* or in the literature, not seen in clinical trials, are considered rare and are italicized.)

Body as a Whole: Malaise, swelling of lips and tongue, photosensitivity, *anaphylaxis*, anaphylactoid reactions.

Cardiovascular: Hypertension, congestive heart failure.

Digestive: Vomiting, jaundice, melena, aphthous stomatitis, dry mouth and mucous membranes, bloody diarrhea, hepatitis, *hepatic necrosis*, appetite change, pancreatitis with or without concomitant hepatitis, *colitis*.

Hemic and Lymphatic: Hemoglobin decrease, leukopenia, thrombocytopenia, *hemolytic anemia, aplastic anemia, agranulocytosis*, purpura, *allergic purpura*.

Metabolic and Nutritional Disorders: Azotemia.

Nervous System: Insomnia, drowsiness, depression, diplopia, anxiety, irritability, *aseptic meningitis*.

Respiratory: Epistaxis, asthma, laryngeal edema.

Skin and Appendages: Alopecia, urticaria, eczema, dermatitis, *bullous eruption, erythema multiforme major*, angioedema, *Stevens-Johnson syndrome*.

Special Senses: Blurred vision, taste disorder, reversible hearing loss, scotoma.

Urogenital: *Nephrotic syndrome*, proteinuria, *oliguria, interstitial nephritis, papillary necrosis, acute renal failure*.

Incidence Less Than 1% - Causal Relationship Unknown: (Adverse reactions reported only in worldwide marketing experience or in the literature, not seen in clinical trials, are considered rare and are italicized.)

Body as a Whole: Chest pain.

Cardiovascular: Palpitations, *flushing*, tachycardia, premature ventricular contractions, myocardial infarction.

Digestive: Esophageal lesions.

Hemic and Lymphatic: *Bruising*.

Metabolic and Nutritional Disorders: Hypoglycemia, *weight loss*.

Nervous System: Paresthesia, memory disturbance, nightmares, tremor, tic, *abnormal coordination*, convulsions, *disorientation*, *psychotic reaction*.

Respiratory: Dyspnea, hyperventilation, edema of pharynx.

Skin and Appendages: Excess perspiration, *exfoliative dermatitis*.

Special Senses: Vitreous floaters, night blindness, amblyopia.

Urogenital: Urinary frequency, nocturia, hematuria, impotence, vaginal bleeding.

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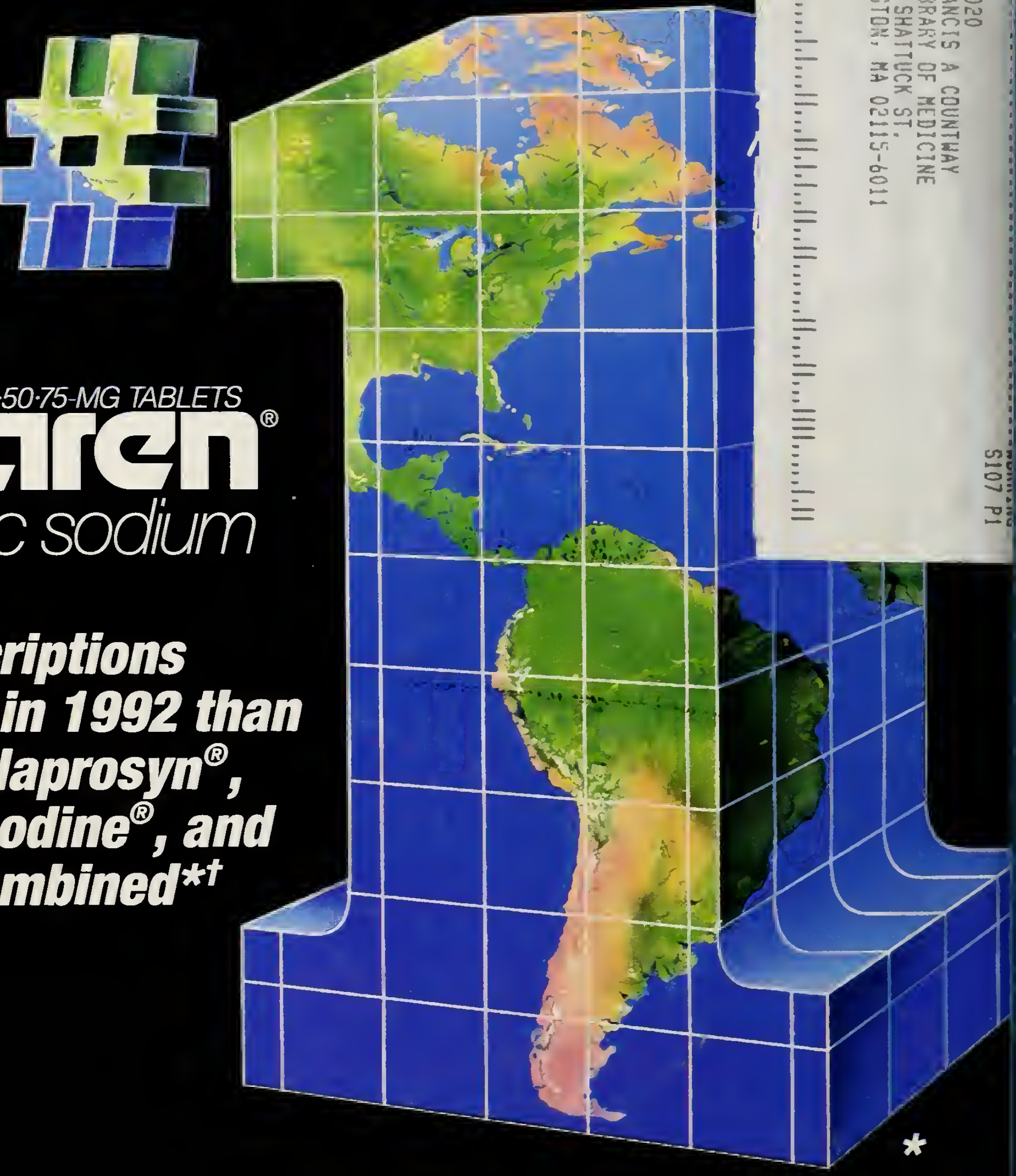

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388-42171-A 2

Missouri Medicine

ournal of the Missouri State Medical Association

March 1995

137th Annual Meeting of the Missouri State Medical Association
March 23-26, 1995 ■ Adam's Mark Hotel, St. Louis, Missouri

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VOLUME 92, NUMBER 3

1994 Financial Statements

Missouri State Medical Association 123
Missouri State Medical Foundation 130
MSMA Physicians' Health Foundation 132
Missouri State Medical Services, Inc. 134
MSMA Health Education Foundation 136
MSMI, Incorporated 138

Editor's Desk

Ethics and Research 110
J. Regan Thomas, MD, Editor

Otolaryngology Quiz #2 113
David Parsons, MD & Jerry Templer, MD

Perspectives

Managed Care Strives to Escape Accountability 116
Arthur Gale, MD

Scientific Section

Decisions in Severe Extremity Trauma 140
Jeffrey O. Anglen, MD

Voice Rehabilitation After Laryngectomy 145
James H. Boyd, MD, FACS, Mark A. Varvares, MD and Sean Fitzmaurice, BS

Alliance Message 148
Membership Notes 120
Historical Record 151
CME Calendar 152
Classified Listings 154

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"Eads Bridge" is a watercolor by Marilynne Bradley, a professional artist in Webster Groves, Missouri.

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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Editor's Desk

Ethics and Research

J. Regan Thomas, MD, Editor

Some of the findings noted that 26% of faculty expected retaliation if they reported misconduct ... Reports of 22% of faculty knew colleagues who had overlooked sloppy data. Faculty who had falsified research data was reported by 6% to 9% of students and faculty. As many as 15% knew of situations where scientists did not report information which they knew would contradict their research.

I have the privilege of serving on the Residency Review Committee (RRC) for Otolaryngology. Each specialty member organization of the Accreditation Council for Graduate Medical Education (ACGME) has an RRC which meets periodically to evaluate residency training programs in their respective specialty area. A key function of the RRC is to survey and evaluate the residency program in order to grant accreditation.

I assume the other specialties' RRC function is similar to the one for Otolaryngology. We evaluate each training program for a wide variety of requirements. These include resident surgical experience and supervision, number and content of lectures and didactic exposure, working conditions and evaluation opportunities, and scholarly activities of the faculty as well as the residents. The issue of research usually comes up. Most RRC's have specific guidelines regarding the residents' research involvement. Traditionally, however, much of an academic department's prestige and its faculty's stature are related to the amount of research work in the department. This may be unrelated to any requirements the department may have for residency accreditation.

That brings me to my concern addressed here. Are there pressures related to academic research today that lend added importance to the need to monitor ethical standards related to research? Similarly, have standards related to reporting research in the lay press and popular media changed in a fashion that may be detrimental to public health?

Everyone now realizes that funding for research is increasingly more difficult to obtain. A dilemma occurs as the demand to continue research activity remains much as it has always been for the academician who wishes promotion, tenure, and influence. If funding more frequently comes from private or corporate sources, even if inadvertent, is there greater possibility for bias?

About a year ago, *American Scientist* magazine reported a study indicating a troubling level of scientific misconduct and shifting of ethical standards related to researchers. Apparently everything from plagiarism to falsifying statistics and research data has become common. This survey was at the time, the largest study of this issue ever compiled.

Some of the findings noted that 26% of faculty expected retaliation if they reported misconduct.

Certainly not an incentive to improve the situation. Reports of 22% of faculty knew colleagues who had overlooked sloppy data. Faculty who had falsified research data was reported by 6% to 9% of students and faculty. As many as 15% knew of situations where scientists did not report information which they knew would contradict their research. It is important to note that this survey was not directed specifically at medical research and included wide range of university based scientific research facilities, not primarily medical school research. However, recent controversies surrounding prominent AIDS researchers and prestigious cancer research centers and their data reminds us that we are not immune to these ethical issues.

Related to this issue is the growing tendency to release research information to the media. Unfortunately hyperbole and misinformation are common in these forums and some reports may confuse or mislead the public. The recent reports in two medical journals regarding hepatotoxicity from acetaminophen comes to mind. There was an exaggeration of these risks as reported in the popular media leading to an inappropriate concern by the public about a safe and low risk analgesic preparation. We could simply blame this on the media, but for the public's sake, we need to respond to misleading reports effectively as a profession.

Most hospitals and universities have their own public relations departments and seem anxious to report to the public new findings and discoveries. This can potentially be beneficial for public education and awareness. An informed, educated public will tend to be healthier and make wiser health care choices. I have a suspicion though, that part of the motivation is to heighten the public awareness of the institution itself and in turn aid in patient referrals, enhanced grants and funding. That on the surface is not necessarily bad, but is does highlight the critical ethical balance that must be maintained to avoid misleading the public concern for health information.

Medical research is vital and must be actively supported by the medical community and the general community as well. Research physicians and scientists must work to continue the highest ethical standards that have served them well for centuries. Institutions that foster this scientific and research environment, must be diligent in avoiding pressures that may compromise those standards. MoMed

We could simply blame this on the media, but for the public's sake, we need to respond to misleading reports effectively as a profession.

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Otolaryngology Quiz #2

by David Parsons, MD & Jerry Templer, MD
Division of Otolaryngology, University of Missouri - Columbia

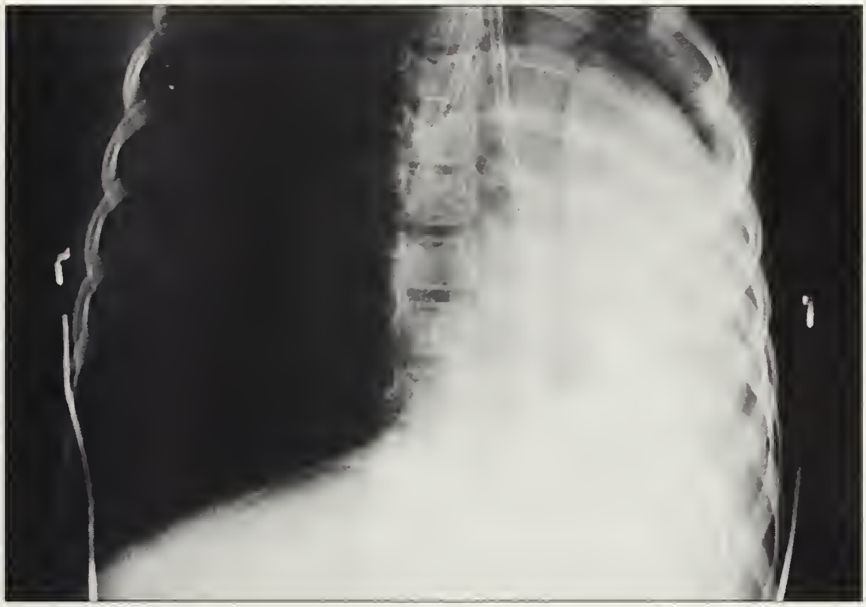

Figure 1

A four-year-old boy was playing alone moments before guests were to arrive for a dinner party. While running he fell and immediately began coughing and gagging. His mother quickly called the doctor's office and talked to her nurse. The nurse questioned whether the child had struck his chest during the fall and if he exhibited bruising. The child admitted striking his chest, but it was not bruised or tender. By this time the child seemed a little better. The nurse instructed the mother to call back if his condition worsened.

The child was somewhat lethargic during the next two days and wheezed intermittently. On the third day he became febrile and dyspneic. He went to the emergency room where he appeared quite ill and was admitted to the hospital. A chest film was obtained (Fig. 1).

The diagnosis is which of the following?

a. Tension pneumothorax
b. Pneumonia
c. Rupture of diaphragm with bowel herniated into chest
d. Bronchial foreign body

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER: d. Bronchial foreign body

The left lung is atelectatic and the hyperinflated lung displaces the mediastinum. At bronchoscopy the mucosa was edematous and a peanut coated with mucus was seen obstructing the left mainstem bronchus (Fig. 2).

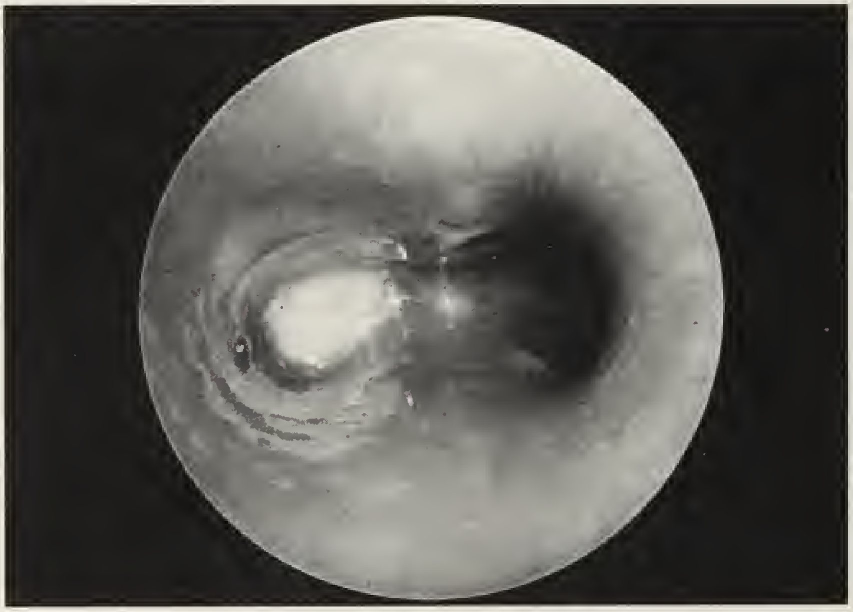

Figure 2

The signs and symptoms of a bronchial foreign body are frequently subtle. Children often are unable to describe an aspiration. The coughing reflex fatigues after several minutes and parents and physicians are lulled into complacency.

Palpation with hands on the chest and an ear at the open mouth may detect the slap of a mobile object within the airway. Early auscultation of the chest reveals wheezes and decreased breath sounds over the obstructed areas. A "two headed stethoscope" (one head for each earpiece) reveals subtle asymmetric variations in breath sounds within the chest. Frequently only a segmental bronchus is obstructed and the signs and symptoms are even more subtle.

The key to the diagnosis of a bronchial foreign body is suspicion of the possibility. The occurrence of a bronchial foreign bodies peaks in children between the stages of acquiring the dexterity to manipulate objects and acquiring the judgment to avoid aspiration. If a small child with an object or an article of food (small enough to traverse the larynx, but too large to be easily coughed out) experiences paroxysms of coughing, aspiration must be considered. Children should not eat while running about and should not eat nuts until the development of molar teeth which effectively grind them into a suitable bolus.

Before bronchoscopy was available patients with bronchial foreign bodies frequently died from pneumonia. The foreign body should be removed under direct vision with optical forceps designed for the specific object.

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The Medical Marketplace Needs More, Not Less, Regulation:

Managed Care Strives to Escape Accountablity

Arthur Gale, MD, St. Louis Metropolitan Medical Society

Today the buzz words for controlling medical costs are "let the marketplace work," or "the marketplace is already working, we don't need government interference." Most of the time these words are spoken by representatives of the for-profit managed care HMOs and their big business backers.

Physicians as small businessmen are often sympathetic to this point of view. Furthermore, as members of perhaps the most over-regulated profession in the nation, many physicians have joined the chorus in supporting an unfettered marketplace. But does our medical profession really understand what is happening in the marketplace? While physicians are over-regulated, the insurance industry, and particularly the for-profit HMOs, are hardly regulated at all. In our so-called free market, physicians are at a marked disadvantage in dealing with insurance companies.

The following is a list of major areas where the insurance industry and their patrons - the large corporations - have been able to escape accountability:

- **Anti-trust:** The McCarran-Ferguson Act exempts the insurance industry from Federal anti-trust laws which apply to almost all other major U.S. businesses. Anti-trust regulation is left to the states. The states often apply these regulations unevenly and often lack the financial resources and legal expertise to pursue anti-trust violations vigorously.

Physicians, on the other hand, feel the heavy hand of government anti-trust regulations. If two physicians even dare to discuss the price of an office visit, they can be hauled into court and fined. Meanwhile, large HMO oligopolies carve up markets and virtually dictate reimbursement to the medical profession.

- **ERISA (Employee Retirement Income Security Act):** ERISA is the Federal law which applies to companies, labor unions, and trade associations which self-insure. From 60-65% of all employees in the U.S. are covered under ERISA. Many physicians are familiar with the fact that in order to initiate health care reform, states need ERISA waivers. But few members of our profession are aware that employers and their third party administrators (TPAs) - the for-profit HMOs - are not accountable and not liable under ERISA for acts of medical negligence or for unfair insurance practices. Two famous court cases - McGann and Corcoran - confirmed ERISA's right to pre-empt state insurance regulations.

The most flagrant and widely known case of unfair insurance practices is the McGann case. In 1988, John McGann of Houston contracted AIDS. **After** he ran up bills totalling $5,000, his employer changed the plan and limited medical expenses for AIDS to $5,000. McGann sued his employer for discriminatory practices. The Federal Circuit and Appellate courts both ruled that under ERISA, his employer had a perfect right to change the plan at any time. The U.S. Supreme Court refused to hear the case.

The Corcoran case from Alabama illustrates that patients injured by insurance companies' utilization practices cannot obtain justice. In 1992, Florence Corcoran was eight months pregnant. Her obstetrician recommended that she remain in the hospital because of medical problems associated with her pregnancy. To save money, the insurance company utilization review managers refused to pay for further hospitalization. She was discharged against her doctor's advice; the fetus went into distress and died. Corcoran sued the insurance company in Federal court. The court ruled that although the outcome was not just, under ERISA Corcoran did not have a valid claim.

These court decisions granted self-insured corporations and their HMO TPAs the right to treat the health of their employees as they see fit, with full immunity from liability.

- **Hold harmless clauses:** As if ERISA were not enough to ensure their immunity from liability, the managed care insurance companies have their physician providers sign hold harmless clauses. The managed care HMOs want to "manage" patient care but if something goes wrong, guess who is left holding the bag. It is certainly not the insurance company who is actually engaged in the micro-managing of patient care, but it is the doctor who signed the hold harmless clause.

If the government micro-managed care like the for-profit HMOs, every doctor in the country would be screaming to his or her legislator about the intrusiveness of Big Brother. When the private industry insurance coalition dictates how physicians should treat their patients in a "free market," for some unknown reason there is hardly a murmur of protest.

- **Medical standards, guidelines, outcome studies, physician profiling and de-selection:** Insurance companies are developing their own practice parameters, utilization review, outcome studies, and physician profiling. The software for these activities is already in place. The for-profit HMOs do not use guidelines concerned with quality of care which are developed by specialty societies or government licensing agencies. They develop their own guidelines because their primary goals are cutting costs and increasing profits.

Consider the hurdles which the student must overcome to become a practicing physician. There is pre-med, acceptance to and graduation from a licensed medical school, state licensure, residency program, and board certification. In this entire process, which can take from 12 to 16 years of an aspiring doctor's life, professional organizations such as medical schools, government licensing agents, academic medical centers and specialty societies, determine who can become a physician and how and what he or she may practice. Now, all over America, for-profit HMOs have usurped the traditional role of academic medical centers, professional organizations and government licensing agencies, to dictate how physicians must practice and care for patients. If a physician does not follow the guidelines established by the insurance companies, which are often based on economic necessities (economic credentialling), he or she may be de-selected from the plan and have no patients to treat. If the physician complains that he or she was acting in the best medical interest of the patient, there is no independent appeals process. The physician can be kicked out of the plan for complaining.

- **Failure to inform enrollees of the details of operation of the managed care plan:** Presently managed care plans are not required to inform enrollees about details of the plan's operation. Enrollees are kept in the dark about physician financial incentives to under-serve patients, e.g., the gatekeeper withhold. Enrollees are not informed in plain English about the plan's exclusions, limitations of physician choice, co-payments, co-insurance, referral and treatment options. In other words, in the world of managed care, there are no truth in lending, truth in packaging, or truth in labeling laws as there are in almost every other major U.S. industry.

The AMA is seeking to remedy this problem. Ironically, the AMA's approach is the introduction of more, not less, regulation of the medical marketplace.

In order to obtain anti-trust relief, the AMA has proposed the Health Care Anti-Trust Improvement act of 1993 (the Hatch-Archer bill) to enable physicians to form networks just like the insurance companies. In addition, the AMA adopted a resolution from the Missouri delegation to support efforts in Congress to repeal the McCarran-Ferguson Act.

Continued on page 118

Continued from page 117

The AMA also adopted another Missouri resolution and crafted legislation to correct the inequities of ERISA. Entitled "The Negligent Utilization Review and Remedies Act," it would prevent managed care companies from engaging in unfair insurance practices and negligent patient care.

The AMA's Patient Protection Act and the MSMA's Patient Fairness Act address most of the other issues listed above.

The so-called free market can best be described as a competitive sport, like football, basketball or baseball. When the ball is thrown in play, the side which is most competitive gains the victory. "May the best man win" is the motto accepted by most Americans. But in all sporting events, the contestants compete according to strict rules, so that one side does not have an advantage over the other. This is why we so often hear today the cliché, "level playing field." The problem in the medical marketplace is that the insurance companies and their big business backers have come to the contest with their own set of rules. And they often change the rules in the middle of the game.

The domination of the market by the payors raises the age-old question of what is the proper function of government. The answer is that the proper role of government is to set and enforce the rules of the game to ensure that the contest is fair, so that the final outcome in the marketplace is the best quality product at the lowest cost.

In framing our republic, the founding fathers did not discuss "free markets." They knew from their study of history that the most important function of government is to prevent tyranny by limiting power. That is why our Constitution established checks and balances and separation of powers. Checks and balances and limitation of power apply not just to the structure of government, but to the private sector and to the marketplace, including the medical marketplace.

According to historian Joseph Ellis in his book *Passionate Sage*, John Adams (signer of the Declaration of Independence, second President of the U.S., and a leading intellectual light of the Federalists) never believed in the benign operation of the marketplace. As an old Puritan, he understood human nature. Without regulation, the marketplace will degenerate into a jungle where the strong will dominate the weak. Tyranny will ensue and society will break down. James Madison, father of the U.S. Constitution, agreed with Adams that government is the guarantor, not the threat, to liberty. That is why the government regulates the stock market, banks, saving & loans associations, the automobile industry, and just about every other American industry.

But the insurance industry and their corporate customers want to remain exempt from regulations. At the recent Missouri House of Representatives' hearings, the business-insurance lobby testified against the Patient Fairness Act sponsored by the MSMA. Among those who testified against the Act were Blue Cross/Blue Shield, CIGNA, Missouri Chamber of Commerce, National Federation of Independent Business, and General American. It is not difficult to understand why they would be against regulations which would make their industry as accountable as every other industry in the United States and as accountable as the medical profession.

The managed care industry has put forth a host of arguments in opposition to the Patient Fairness Act. For example, they call the Act a doctor-protection act because it contains an any willing provider clause. (It does not contain such a clause.) But basically all of their arguments can be boiled down to three words: **avoidance of accountability**. The insurance industry knows that if it were held accountable, it would no longer achieve its so-called cost savings; it would no longer be able to dominate the market and reap enormous profits.

All citizens, including our elected legislators, the medical profession and even businessmen and insurance executives should understand that regulation - not the over-regulation which our nation has recently experienced - is a necessity for our democratic society to function properly. According to the framers, accountability and limitation of power comes first and is more important than the unregulated, so-called free market. No one stands above the law. That's the American way of doing things. MoMed

The Author

Arthur Gale, MD, is a private practice internal medicine physician in Overland, Missouri. He is past president of the St. Louis Metropolitan Medical Society and currently serves MSMA as an AMA Alternate Delegate.

MSMA Director of Field Services Hired

Jeffrey S. Howell became the new Missouri State Medical Association Director of Field Services this month, replacing recently departing Jim Glover. Mr. Howell will also work on two of the association's companion societies, the Missouri State Allergy Association and the Missouri State Orthopaedic Association.

Howell, a native of St. Louis, is a 1993 graduate of the University of Kansas, where he studied political systems and comparative state politics. He spent the last two years with the American Legislative Exchange Council (ALEC), a state legislative membership association in Washington, D.C. There he served as the Assistant Director of Membership, Meetings & Conventions. During his time there, membership in the organization increased 24 percent.

Howell stated, "With the high visibility of the MSMA at the Capitol and throughout the state, coupled with our strong membership base, it should not be difficult to increase our membership a significant percentage. It is also important we listen to our members concerns and become more responsive to them." MoMed

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Membership Notes

David Joseph Sullivan, MD

David Joseph Sullivan, MD, a Washington University resident, is one of the 40 honorees of the AMA/Burroughs Wellcome Co. Leadership Award Program for resident physicians. The AMA established the Leadership Program to build ties between organized medicine and resident physicians who have displayed a commitment to community service.

As a medical student, Dr. Sullivan volunteered in a homeless shelter. During the past three years he has run medical clinics in three homeless shelters. The shelter project is a framework for providing medicines, x-rays, laboratories and ancillary services. He uses this project to encourage medical students and colleagues to participate in community service. Dr. Sullivan also helps provide medical care to 25 immigrant Tibetans.

Julie Miller, Robert Puchalski and **Nevada Reed**, medical students from Washington University are the recipients of the 1995 AMA/Glaxo Achievement Award. The Award winners were selected based on their non-clinical leadership activities. The award recipients will be honored with a reception and award ceremony at the 1995 AMA National Leadership Conference, this month in Washington, DC.

S. Robert Kovac, MD, St. John's Mercy Medical Center, in St. Louis, has been appointed Professor and Director of the Division of Gynecology, Department of Obstetrics and Gynecology at Wright State University School of Medicine in Dayton, Ohio.

Dennis W. Choi, MD, PhD, Jones Professor and head of the Department of Neurology at Washington University School of Medicine, has received a grant to continue work on injuries to the nervous system. The five-year award comes from the Neurology Institute of the National Institute of Neurological Diseases and Strokes. Research teams led by Dr. Choi and eight other faculty in the School's Center for the Study of Nervous System Injury will determine how interactions between cells contribute to damage when the brain is deprived of oxygen.

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Robert Puchalski

AMA PHYSICIAN'S RECOGNITION AWARDS

The following physicians have completed 150 hours of continuing medical education within a three-year period. Sixty of the credit hours are earned in Category I programs.

George P. Ahlering, ***St. Louis***
Sedat M. Ayata, ***St. Louis***
Donald F. Bandle, ***St. Louis***
Thomas W. Carroll, ***Lamar***
Sophia M. Chung, ***St. Louis***
Hillard K. Cohen, ***St. Ann***
Richard E. Crandall, ***Chesterfield***
James M. Daily, ***Springfield***
Jonathan A. Gold, ***St. Louis***
Kurt A. Henry, ***St. Louis***
William Kimlinger, ***Jefferson City***
James P. LaBach, ***Kansas City***
John W. McAllister, ***Chesterfield***
Victor E. Mejia, ***Sikeston***
Donald R. Patterson, ***Joplin***
Michaele M. Penkoske, ***St. Charles***
Charles R. Peterson, ***Osage Beach***
William B. Pingelton, ***Columbia***
Kenneth C. Place, ***Kansas City***
Lynn H. Roh, ***Kansas City***
Hubert E. Smith, ***Kansas City***
Theodoro C. Tang, ***Salem***

Membership Notes

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BOONE

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Oklahoma Univ Okla City; 1971

RESIDENTS

Bryan J. Albracht, DO - FP
Craig D. Barbieri, MD - FP
Michael L. Davis, MD - FP
Heidi Fischer, MD - OPH
Carole A. Guillaume, MD - FP
Brian V. Joachims, MD - FP
Mark T. McKay, MD - FP
Virginia P. Messmore, MD - FP
James L. Mitterando, MD - FP
Stephen G. Nolker, MD - FP
Gregory P. O'Connell, MD - FP
Terri L. Prichard, MD - FP
Mary K. Randolph, MD - FP
Stephen L. Regas, MD - FP
Walter W. Rucker, MD - FP
Paul J. Schleicher, MD - FP
Michael J. Slattery, MD - FP
Ann K. Smith, MD - FP
Fritz W. Swearingen, DO - AN
Ronda Lynn Warren, MD - FP
Michael A. Yoesel, MD - FP

STUDENTS

St. Louis University
Ronald Barbosa
Richard A. Felkel
Liam Gannon
Jason Gutting
Brian K. Jeffords
Cory T. Johnson
Matthew L. Johnston
Lonnie J. Mine
Jeff Monson
Kimberly Morse
John J. Plewa
Jon R. Robison
Margaret A. Sopuch
Frederick Wagner
Jeffrey P. Yannette

University of Missouri-Columbia
Charles R. Conway

Tufts University
Melissa L. Plocher

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Sedgwick James of Missouri, Inc.
2420 Pershing Rd., Suite 220
Kansas City, MO 64108
Attn: Lisa Winchester

REPORT OF MISSOURI STATE MEDICAL ASSOCIATION

December 31, 1994
Jefferson City, Missouri

INDEPENDENT AUDITOR'S REPORT

To the Council of
Missouri State Medical Association:

We have audited the accompanying Balance Sheets of Missouri State Medical Association as of December 31, 1994 and 1993, and the related Statements of Revenues, Expenses, and Changes in Members' Equity and Cash Flows for the years then ended. These Financial Statements are the responsibility of the Association's management. Our responsibility is to express an opinion on these Financial Statements based on our audits.

We did not examine the Financial Statements of MOMED Holding Company at December 31, 1994 and 1993. These Financial Statements were audited by another firm.

These Financial Statements are not in accordance with Generally Accepted Accounting Principles, which require investments in the subsidiary and the affiliate to be consolidated with the controlling entity.

We conducted our audits in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the Financial Statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used, and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, except for the above comments, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Association as of December 31, 1994 and 1993, and the results of their operations and its cash flows for the years then ended in conformity with Generally Accepted Accounting Principles.

Our audits were made for the purpose of forming an opinion on the basic Financial Statements taken as a whole. The Schedules of Selected Expenses for the years ended December 31, 1994 and 1993 are presented for purposes of additional analysis and are not a required part of the basic Financial Statements. Such information has been subjected to the auditing procedures applied in the audit of the basic Financial Statements and, in our opinion, is fairly stated in all material respects in relation to the basic Financial Statements taken as a whole.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 26, 1995

MISSOURI STATE MEDICAL ASSOCIATION

BALANCE SHEETS

December 31, 1994 and 1993

	1994	1993
ASSETS		
CURRENT ASSETS		
Cash and Cash Investments (Note 2)	$ 495,345	$1,399,690
Marketable Securities (Note 3)	1,608,476	1,152,371
Accounts Receivable	33,425	8,567
Other Current Assets	6,244	9,672
Total Current Assets	2,143,490	2,570,300
INVESTMENTS		
Common Stock of MOMED Holding Company, a 10.8% owned Affiliate, lower of cost or market (Note 5)	169,295	169,295
Common Stock of Missouri State Medical Services, Inc. (Note 13)	(95,039)	0
Common Stock of MSMI, Inc., a 100% owned unconsolidated Subsidiary, at cost plus equity in undistributed net income (Note 4)	33,815	34,835
Total Investments	108,071	204,130
LAND, BUILDING AND EQUIPMENT (Note 6)	494,728	525,825
OTHER ASSETS		
Cash Surrender Value - Insurance	102,447	82,788
Note Receivable, Missouri State Medical Services, Inc. (Note 14)	150,497	0
Total Other Assets	252,944	82,788
TOTAL ASSETS	$2,999,233	$3,383,043
LIABILITIES AND MEMBERS' EQUITY		
CURRENT LIABILITIES		
Accounts Payable and Accrued Expenses	$ 29,628	$ 11,574
Due to the American Medical Association	109,497	187,740
Deferred Revenue	149,543	217,872
Total Current Liabilities	288,668	417,186
SUBORDINATED NOTES PAYABLE (Note 7)	590,781	590,781
DEFERRED COMPENSATION (Note 8)	73,500	66,747
Total Liabilities	952,949	1,074,714
MEMBERS' EQUITY	2,046,284	2,308,329
TOTAL LIABILITIES AND MEMBERS' EQUITY	$2,999,233	$3,383,043

The Notes to Financial Statements are an integral part of these Statements.

MISSOURI STATE MEDICAL ASSOCIATION

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN MEMBERS' EQUITY

For the Years Ended December 31, 1994 and 1993

	1994	1993
REVENUES		
Dues	$1,224,747	$1,243,731
Subscriptions	16,005	17,148
Exhibit Rentals	15,000	25,000
Advertising	53,553	55,733
Commissions on Collections	14,635	13,668
Investment Income (Note 9)	109,708	231,189
Administrative Fees and Office Rent (Note 10)	45,704	44,506
Seminars and Workshops	24,440	51,164
Physicians Health Foundation (Note 11)	99,950	71,900
Royalties (Note 15)	53,820	0
Other Revenue	31,333	24,008
Total Revenues	1,688,895	1,778,047
EXPENSES		
Salaries and Fringe Benefits	$ 839,035	$ 776,781
Office Expense	106,554	100,746
Travel Expense	14,559	11,331
Commissions and Committee Expense	18,072	17,833
Depreciation	37,315	47,876
MSMA Auxiliary	10,081	9,435
Journal Expense	106,136	129,719
Meeting Expense	235,397	209,753
Public Affairs	54,321	25,845
Consultant and Professional Fees	106,789	78,742
Public Relations Program	29,686	38,330
Student Awards	1,200	1,200
Tort Reform	4,638	5,441
Miscellaneous	6,680	22,531
Seminars and Workshops	26,047	45,780
Physicians Health Foundation (Note 11)	161,969	150,542
MSMA Health Education Foundation	18,390	0
Medicaid Project	0	330
Medical Research Center	15,000	31,218
Physicians Guides to Law & Medicine	33,012	45,000
Missouri State Medical Foundation	0	211
Total Expenses	1,824,881	1,748,644
Excess (Deficiency) of Revenues Over Expenses Before Equity in Net Income of Investments	$(135,986)	$ 29,403
Equity in Subsidiary of MSMI, Inc. (Note 4)	(1,020)	1,620
Equity in Subsidiary of MSMS, Inc.	(125,039)	0
Excess (Deficiency) of Revenues Over Expenses	(262,045)	31,023
MEMBERS' EQUITY, BEGINNING	2,308,329	2,277,306
MEMBERS' EQUITY, ENDING	$2,046,284	$2,308,329

MISSOURI STATE MEDICAL ASSOCIATION

STATEMENTS OF CASH FLOWS

For the Years Ended December 31, 1994 and 1993

	1994	1993
CASH FLOWS FROM OPERATING ACTIVITIES	$(262,045)	$ 31,023
ADJUSTMENTS TO RECONCILE EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES TO NET CASH PROVIDED BY OPERATING ACTIVITIES:		
Depreciation	$ 37,315	$ 47,876
(Increase) or Decrease to Accounts Receivables	(24,858)	13,755
(Increase) or Decrease in Other Current Assets	3,428	(5,991)
(Increase) or Decrease in Cash Surrender Value	(19,659)	(14,210)
(Increase) or Decrease in Note Receivable, MSMS, Inc.	(150,497)	0
Increase or (Decrease) in Accounts Payable	18,054	7,616
Increase or (Decrease) in Due to the AMA	(78,243)	7,858
Increase or (Decrease) in Deferred Revenue	(68,329)	(173)
Increase or (Decrease) in Deferred Compensation	6,753	6,552
Total Adjustments	(276,036)	63,283
Net Cash Provided by Operations	(538,081)	94,306
CASH FLOW FROM INVESTING ACTIVITIES:		
(Increase) or Decrease in Marketable Securities	(456,105)	(115,499)
(Increase) or Decrease in MSMI, Inc. Investment	1,020	(1,620)
(Increase) or Decrease in MSMS, Inc. Investment	95,039	0
Purchase of Equipment	(6,218)	(5,295)
Net Cash Used Investing	(366,264)	(122,414)
NET INCREASE OR (DECREASE) IN CASH	(904,345)	(28,108)
CASH AT BEGINNING OF YEAR	1,399,690	1,427,798
CASH AT END OF YEAR	$ 495,345	$1,399,690

The Notes to Financial Statements are an integral part of these Statements.

MISSOURI STATE MEDICAL ASSOCIATION
NOTES TO FINANCIAL STATEMENTS
December 31, 1994 and 1993

Note 1. Summary of Significant Accounting Policies

Organization:
The Missouri State Medical Association was incorporated as a not-for-profit corporation under the laws of the State of Missouri. The Internal Revenue Service has granted exemption under Code Section 501(c)(6).

Basis of Accounting:
The Financial Statements of the Missouri State Medical Association are prepared on the Accrual Basis of Accounting.

Dues:
Dues are assessed to members on a calendar-year basis. On December 31st of each year, members delinquent in payment of dues forfeit their memberships. The Association may also collect from members dues and assessments of the American Medical Association and County Medical Societies which are then forwarded to the respective organizations. The Association receives a fee for providing this service. Amounts received from members prior to January 1st of each year, which represents the subsequent year's dues, are recorded as Deferred Revenue.

Valuation of Accounts Receivable:
Accounts receivable are stated at face amount with no allowance for doubtful accounts. An allowance for doubtful accounts is not considered necessary because probable uncollectible accounts are immaterial.

Marketable Securities:
Investments in marketable equity securities are carried at the lower of aggregate cost or market at the Balance Sheet date.

Property and Equipment:
Property and equipment are carried at cost. Depreciation is computed by the straight-line method based on estimated useful lives of the related assets.

Income Taxes:
The Association is exempt from Federal Income Taxes under the Internal Revenue Code Section 501 (c)(6). Any unrelated business income is subject to income tax.

Note 2. Cash and Cash Investments

The balance of cash and cash investments consisted of the following at December 31st:

	1994	1993
Petty Cash	$ 50	$ 50
Cash in Bank, Executive Vice President Account	8,110	9,664
Cash in Bank, Treasury Account	31,620	1,029
Money Market Fund	266,565	306,022
Certificates of Deposit	189,000	747,000
Mutual Funds	0	335,925
TOTAL CASH	$ 495,345	$1,399,690

Note 3. Marketable Securities

Investments in marketable equity securities are carried at the lower of aggregate cost or market at the Balance Sheet date.

The following is a summary of marketable equity securities at December 31st:

	1994	1993
Aggregate Cost	$1,608,476	$1,152,371
Aggregate Market	1,675,646	1,301,524
UNREALIZED GAIN	$ 67,170	$ 149,153

Net realized gain of $16,055 and $137,711 on the sale of marketable equity securities were included in revenue for the years ended December 31, 1994 and 1993, respectively.

Note 4. Investments in Unconsolidated Subsidiary - MSMI, Inc.

The Association's investments in MSMI, Inc., a 100% owned unconsolidated subsidiary, is carried at cost ($2,000) plus equity in the undistributed net earnings since the date of acquisition. At December 31, 1994 and 1993, the investment in the subsidiary is carried at $33,815 and $34,835 respectively.

Condensed financial data relating to the subsidiary follows:

BALANCE SHEETS

	---December 31--- 1994	 1993
ASSETS		
CURRENT ASSETS		
Cash, including Savings Account	$ 20,815	$ 22,835
Total Current Assets	$ 20,815	$ 22,835
INVESTMENTS - COMMON STOCK	15,000	15,000
TOTAL ASSETS	$ 35,815	$ 37,835
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts Payable	$ 2,000	$ 3,000
STOCKHOLDERS' EQUITY		
Common Stock, $10 par value: 3000 shares authorized; 200 shares issued and outstanding	2,000	2,000
Retained Earnings	31,815	32,835
Total Stockholders' Equity	33,815	34,835
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 35,815	$ 37,835
STATEMENTS OF INCOME AND EXPENSES		
Income	$ 2,275	$ 5,937
Expenses	3,295	4,317
NET INCOME (LOSS)	$(1,020)	$ 1,620

Note 5. Investment in Affiliate

At December 31, 1993, the Association exercised significant management control over its affiliate MOMED Holding Company, owner of Missouri Medical Insurance Company (MOMEDICO), a mono-line medical professional liability insurance company founded and sponsored by the Association.

On August 16, 1994, Missouri State Medical Association exchanged 24,185 shares of MOMED Holding Company's authorized and outstanding Class B common stock for 24,185 shares of MOMED Holding Company's Class A common stock (500,000 shares authorized), and 24,185 shares of its Class C common stock.

The Class A common stock has the same rights as all other issued and outstanding shares of MOMED Holding Company's Class A common stock.

The MOMED Holding Company's Class C common stock is non-voting. MOMED Holding Company has agreed to acquire these 24,185 shares over the next four years at $24.81 per share. Aggregate cash consideration excluding interest will then be $600,000.

As a result of the aforementioned share exchange during 1994, the Association does not exercise significant management control over MOMED Holding Company at December 31, 1994.

Most recently available condensed financial data relating to MOMED Holding Company follows:

	--At December 31, 1993--
Assets	$77,596,377
Reserve for Losses and Loss Adjustment Expenses	59,596,371
Stockholders' Equity	10,148,416
Net Premiums Earned	10,645,733
Realized Gains (Losses) on Investments	570,980
Loss and Loss Adjustment Expenses Incurred	14,438,684
Net Investment Income	3,641,198
Earnings (Loss) before Income Taxes	(2,095,133)
Provision for Federal Income Taxes (Benefits)	(776,594)
Earnings (Loss) before Cumulative Effect of Change in Accounting Principle	(1,318,539)
Cumulative Effect of Change in Accounting Principle	900,000
Net Earnings (Loss)	(418,539)
Earnings (Loss) per Share before Cumulative Effect of Change in Accounting Principle	$ 5.89
Cumulative Effect of Change in Accounting Principle	4.02
Net Earnings (Loss) per Share	$(1.87)

Note 6. Land, Building and Equipment

Consists of the following at December 31st (at Cost):

	1994	1993
Land	$ 83,000	$ 83,000
Building	581,704	581,704
Furniture and Equipment	316,087	309,869
Total	980,791	974,573
LESS: Accumulated Depreciation	486,063	448,748
TOTAL LAND, BUILDING AND EQUIPMENT	$ 494,728	$ 525,825

Note 7. Subordinated Notes Payable

In 1978, the Association formed a wholly-owned subsidiary, MOMEDICO, to provide professional liability and premises liability insurance for physicians and support technicians practicing in the State of Missouri. Before obtaining professional liability insurance through MOMEDICO, physicians residing in the State of Missouri were required to subscribe to non-interest bearing subordinated notes based upon the physician's under- writing classification. These notes were issued by the Association and the subscriptions were payable over a three-year period.

The Association was the sole stockholder of MOMEDICO prior to public stock offering of MOMEDICO in 1980. At that time, the requirement to purchase subordinated notes was eliminated with new policies effective January 31, 1980.

In connection with the public stock offering in 1980, MOMEDICO assumed, in exchange for 100,815 of the 125,000 shares of the Class B common stock the Association held in MOMEDICO, the face value of the subordinated notes issued and outstanding. MOMEDICO also assumed the balance of the installments receivable on the subordinated notes and a bank note payable from the Association.

Under an exchange offer made by MOMEDICO, holders of the Association's subordinated note could exchange fully paid notes for Class A common stock at the rate of $20 face value per share.

On October 15, 1980, the Association reassumed all notes not exchanged and also the installments receivable on the unexchanged notes as well as an amount equal to the installments receivable of the bank note payable.

The notes require repayment only upon the Association's accumulation of an excess of $3,000,000 of Members' Equity at the end of any calendar year, that the Association has sufficient funds and assets, exclusive of the amount subject to repayment, and that repayment be approved by the Council of the Association. Interest may be paid on the notes, but it is at the discretion of the Council of the Association.

Redemption of the notes are provided for in the event of death, disability, retirement of the holder, or if the holder has moved both his person and his practice out of the State of Missouri. However, redemption for such causes may be delayed or refused if the Council deter- mines the Association is not on a financially reasonable basis to make such redemptions.

At both December 31, 1994 and 1993, the balance for the subordinated notes payable were $590,781. This amount reflects the face value of the notes reassumed by the Association on October 15, 1980, less the installments receivable on the outstanding notes, and less all redemptions made from 1981 through 1985. In 1985, the Council of the Association placed a moratorium on the redemption of the subordinated notes.

Note 8. Deferred Compensation Plan

The Association entered into a deferred compensation agreement with its Executive Vice-President on December 31, 1980, which provides for payments upon retirement, death or disability. The agreement also stipulates that a pro-rata settlement of benefits will be made in the event of voluntary termination of employment with the Association once five years of service is completed after the agreement becomes effective. A similar agreement was enacted May 1, 1990 between the Executive Director and the Association. Both agreements are funded through insurance policies.

At December 31, 1994 and 1993, the Association's liability under the terms of these agreements were $73,500 and $66,747, respectively with the underlying cash surrender value of life insurance being $102,447 and $82,788, respectively.

On December 17, 1989, the Association adopted a Deferred Compensation Plan for employees pursuant to Internal Revenue Service Code Section 457. Virtually all employees are covered by the Plan. Within Internal Revenue Service guidelines, participants may elect to defer a portion of their income until retirement. Funds invested for these purposes amounted to $122,271 and $83,871 as of December 31, 1994 and 1993, respectively.

Subsequent to the year-ended December 31, 1994, the Executive Vice President retired, with the Executive Director assuming the position of Executive Vice President on January 1, 1995.

Note 9. Investment Income

The following is a summary of investment income for the years ended December 31st:

	1994	1993
Interest on Cash Investments	$ 38,284	$ 30,871
Dividends	55,369	62,607
Realized Gain or (Loss) on the Sale of Marketable Equity Securities	16,055	137,711
TOTAL INVESTMENT INCOME	$ 109,708	$ 231,189

Note 10. Related Party Transactions

The Association provides administrative services to MSMI, Inc., (a wholly-owned subsidiary) and Missouri State Medical Foundation (an affiliate). For providing these services, the Association receives an annual fee from each of these two organizations. For the years ended December 31, 1994 and 1993, the administrative fee assessed to Missouri State Medical Foundation was $15,000 annually, and the administrative fee assessed to MSMI, Inc., was $2,000 and $3,000, respectively.

Note 11. Physicians Rehabilitation Program

In 1986, the Association established a Physicians Rehabilitation Program, the purpose of which is to motivate impaired physicians to voluntarily enter into treatment and to provide such a treatment program.

Funding for the program is provided by fees assessed to participants as well as from donations received from supportive individuals and organizations.

During 1992, the Missouri State Medical Association Physicians Health Foundation was separately incorporated. For the years ended December 31, 1994 and 1993, the Association received as income $99,950 and $71,900 from the Physicians Health Foundation and in turn paid expenses of $161,969 and $150,542, respectively. The resulting differences of $62,019 and $78,642 are considered in-kind contributions to the Physicians Health Foundation for the years ended December 31, 1994 and 1993.

Note 12. Pension Plan

The Association maintains a non-contributory Defined Benefit Pension Plan covering substantially all of its employees. Established April 1, 1959, the Plan has a March 31st year end. Eligibility requirements include a minimum of 12 service months and a minimum age of 21. Normal retirement age is 65 with provision for prorata benefits prior to 65. Vesting is scheduled over six years of covered service. The Individual Aggregate Actuarial Cost Method is used as the basis for the funding standard account computation. At March 31, 1994, the most recently available actuarial information, fair value of plan assets was $855,008, $948,657 in 1993. Total benefit obligation was $707,971, $726,702 in 1993, with a vested benefit obligation of $704,125, $725,811 in 1993.

Employer contributions for FYE March 31, 1994 was $88,597, $68,594 in 1993. Additional Plan income was $49,200, $84,521 in 1993, with expenses of $203, $387 in 1993, and benefits paid in the amount of $231,244, $0 in 1993, and net income (less) for the Plan year was $(96,500), $152,728 in 1993. There was no unconditional liability for any unfunded accumulated benefit obligation plus any prepaid pension cost, nor unfunded accumulated benefit obligation reduced by any unfunded accrued pension cost. Assets are invested primarily in government securities and corporate stocks and bonds.

Net periodic pension costs for 1994 of $90,491, $69,944 in 1993, was composed of employer's normal cost of $83,555, $64,530 in 1993, Amortization charge of $233, $233 in 1993, and interest of $6,703, $5,181 in 1993.

Subsequent to the year-ended December 31, 1994, the Executive Vice President retired, with the Executive Director assuming the position of Executive Vice President on January 1, 1995.

Note 13. Investment in Unconsolidated Subsidiary - MSMS, Inc.

The Association's investments in MSMS, Inc., a 100% owned unconsolidated subsidiary, is carried at cost of $30,000 plus equity in the undistributed net earnings since the date of acquisition. At December 31, 1994, the investment in the subsidiary is carried at $(95,039).

Condensed financial data relating to the subsidiary follows:

BALANCE SHEETS

	1994
ASSETS	
CURRENT ASSETS	
Cash	$ 42,916
LESS: Cash held in Trust for Others (Note 2)	(10,500)
Cash, Net	32,416
Accounts Receivable (Note 1)	24,737
Employee Advances	1,500
Total Current Assets	58,653
PROPERTY AND EQUIPMENT (Note 1)	
Office Furniture and Equipment	4,665
LESS: Accumulated Depreciation	467
Total Property and Equipment	4,198
TOTAL ASSETS	$ 62,851
LIABILITIES AND STOCKHOLDERS' EQUITY	
CURRENT LIABILITIES	
Notes Payable (Note 3)	$150,497
Accrued Expenses	2,600
Interest Payable	4,793
Total Current Liabilities	157,890
STOCKHOLDERS' EQUITY	
Common Stock, $1 par value: 30,000 Shares authorized; 30,000 Shares issued and outstanding 30,000	
Retained Earnings	(125,039)
Total Stockholders' Equity	(95,039)
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 62,851
STATEMENTS OF INCOME AND EXPENSES	
Income	$ 88,469
Expenses	213,508
NET INCOME (LOSS)	$(125,039)

Note 14. Note Receivable, Missouri State Medical Services, Inc.

The note represents monies advanced by Missouri State Medical Association to Missouri State Medical Services, Inc. for initial expenses. The note is a demand note in the amount of $150,497 at December 31, 1994, with interest at the rate of 7.75%. The interest rate adjusts annually on January 1st to the prime rate plus 1%.

Note 15. Royalties

Royalty income is received from Missouri Medical Insurance Co. for use of the Missouri State Medical Association name and various logos in the marketing and advertisement of its professional liability insurance and risk management products. For the year ended December 31, 1994, royalty income received from Missouri Medical Insurance Co. was $30,000.

An additional royalty of $20 per Missouri Medical Insurance Co. insured physician in the State of Missouri as of December 31st of each preceding year, is to be paid on or before February 15th of the following year. At December 31, 1994, royalty income receivable totaled $23,820.

ACCOMPANYING INFORMATION

MISSOURI STATE MEDICAL ASSOCIATION

SCHEDULES OF SELECTED EXPENSES

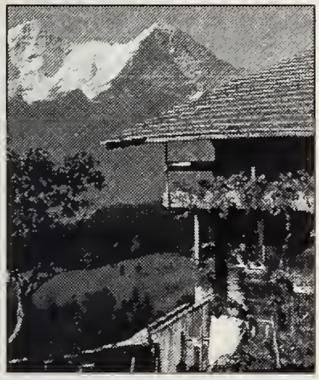
For the Years Ended December 31, 1994 and 1993

	1994	1993
SALARIES AND FRINGE BENEFITS		
Salaries	$ 572,036	$ 537,454
Payroll Taxes	44,255	42,096
Employees Life and Disability Insurance	15,646	22,419
Employees Hospitalization Insurance	59,901	58,318
Employees Pension Plan Contribution	98,797	78,444
Deferred Compensation Plan Expense	48,400	38,050
TOTAL SALARIES AND FRINGE BENEFITS	$ 839,035	$ 776,781
OFFICE EXPENSES		
Occupancy Expense	$ 16,365	$ 16,855
Office Supplies	23,277	21,937
Computer Expense	7,538	(3,357)
Postage	10,883	14,010
Telephone	14,156	13,192
Insurance	(5,378)	(4,794)
General Expense	2,159	0
Taxes, Real Estate	4,435	4,963
Taxes, Other	752	4,109
Custodian Fee	14,349	14,124
Equipment Rental and Repair	8,487	9,376
Dues and Directories	9,529	10,331
TOTAL OFFICE EXPENSES	$ 106,552	$ 100,746

COMMISSIONS AND COMMITTEES EXPENSES		
Commissions:		
Commission on Medical Economics, Third Party Medicine and Governmental Relations	$ 158	$ 302
Commission on Continuing Medical Education	9,869	12,674
Commission on Interspeciality Medicine	288	393
Total Commissions Expenses	10,315	13,369
Committee on Legislative Affairs	$ 635	$ 350
Committee on Public Affairs	154	268
Committee to Develop Physician Direction Organization	6,968	3,846
Total Committee Expenses	7,757	4,464
TOTAL COMMISSIONS AND COMMITTEE EXPENSES	$ 18,072	$ 17,833
MEETING EXPENSES		
Meetings:		
Annual Session	$ 67,349	$ 68,129
Council	62,893	53,862
AMA Delegates' Expenses	98,583	80,624
Student Section	1,927	1,324
Discretionary Council Fund	1,645	1,896
Hospital Medical Staff	3,000	3,918
TOTAL MEETING EXPENSES	$ 235,397	$ 209,753

Notice to MSMA members:

The Annual Meeting of the **Missouri State Medical Foundation** is scheduled for 2:30 p.m., Friday, March 24, 1995, at the Adam's Mark Hotel in St. Louis.



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REPORT OF
MISSOURI STATE MEDICAL FOUNDATION

December 31, 1994
Jefferson City, Missouri

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of
Missouri State Medical Foundation:

We have audited the accompanying Statements of Assets and Fund Balance-Modified Cash Basis of Missouri State Medical Foundation as of December 31, 1994 and 1993, and the related Statements of Revenues, Expenses and Changes in Fund Balance-Modified Cash Basis for the years then ended. These Financial Statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these Financial Statements based on our audits.

We conducted our audits in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the Financial Statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used, and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As described in Note 1, these Financial Statements were prepared on the Modified Cash Basis of Accounting, which is a comprehensive basis of accounting other than Generally Accepted Accounting Principles.

In our opinion, except for the above comments, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Foundation as of December 31, 1994 and 1993, and the results of their operations and its cash flows for the years then ended on the basis of accounting described in Note 1.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 26, 1995

MISSOURI STATE MEDICAL FOUNDATION

STATEMENTS OF ASSETS AND FUND BALANCE - MODIFIED CASH BASIS
December 31, 1994 and 1993

	1994	1993
ASSETS		
CURRENT ASSETS		
Cash and Equivalents	$ 523,237	$ 351,913
Investments (Note 3)	560,899	525,313
Loans Receivable, Current (Note 4)	250,000	208,188
Total Current Assets	1,334,136	1,085,414
LONG-TERM ASSETS		
Loans Receivable, Long-term (Note 4)	1,412,812	1,522,255
Total Long-term Assets	1,412,812	1,522,255
EQUIPMENT		
Office Equipment, Net	1,858	0
Software, Net	6,052	0
Total Equipment	7,910	0
TOTAL ASSETS	$2,754,858	$2,607,669
FUND BALANCE		
FUND BALANCE	$2,754,858	$2,607,669

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCE - MODIFIED CASH BASIS
For the Years Ended December 31, 1994 and 1993

	1994	1993
REVENUES		
Interest on Student Loans	$ 129,487	$ 109,626
Investment Income	37,585	39,001
Contributions	2,858	4,568
Gain on Sales of Securities	14,255	53,520
Total Revenues	184,185	206,715
EXPENSES		
Administrative	$ 15,000	$ 15,216
Professional Fees	9,889	18,093
Printing and Meeting	748	403
Provision for Loan Losses	9,908	3,953
Depreciation	133	0
Amortization	103	0
Miscellaneous	1,215	2,942
Total Expenses	36,996	40,607
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES	147,189	166,108
FUND BALANCE, BEGINNING	2,607,669	2,441,561
FUND BALANCE, ENDING	$2,754,858	$2,607,669

The Notes to Financial Statements are an integral part of these Statements.

MISSOURI STATE MEDICAL FOUNDATION

NOTES TO FINANCIAL STATEMENTS
December 31, 1994 and 1993

Note 1. Summary of Significant Accounting Policies

Organization:

Missouri State Medical Foundation was organized in 1961 for the purpose of making low-interest loans to medical students.

Basis of Accounting:

The accounts are maintained, and these Financial Statements are presented on, a Modified Cash Basis of Accounting. Under that basis, revenues are recognized when received rather than when earned, and expenses are recognized when paid rather than when incurred.

Investments:

Investments are stated at the lower of aggregate cost or market at the Balance Sheet date.

Loans Receivable:

Loans receivable are stated at face amount less an allowance for doubtful accounts of three percent of the loan balances at year end.

Income Taxes:

The Foundation is qualified as an exempt organization under Section 501 (c)(3) of the Internal Revenue Code and is not subject to Federal or State Income Tax.

Note 2. Cash and Equivalents

Cash and equivalents consist primarily of Cash and Government Issues with maturities of one year or less. Cash and equivalents are stated at cost plus accrued interest, which approximates market value.

Cash and equivalents includes the following accounts:

	1994	1993
Cash in Bank, Checking	$ 17,916	$ 4,554
Money Market, Bank	73,939	82,085
Certificate of Deposit, Bank	0	190,000
Money Market, Prudential	0	75,274
Government Issues, Bank	431,382	0
TOTAL CASH	$ 523,237	$ 351,913

Note 3. Investments

At December 31, 1993, the Foundation's portfolio of marketable securities consisted of securities with a cost of $525,313, and market value of $540,467. Gross unrealized gains on all marketable securities were $86,960, and gross unrealized losses were $71,806 for the year then ended. Net realized gains included in revenues were $53,520. The costs of securities sold were determined on a specific share basis.

At December 31, 1994, the Foundation's investments consist of Government Issues, Mortgage and Asset-backed Issues, and Taxable Bonds, all having maturities in excess of one year, and a Mutual Fund Portfolio. Government Issues and Bonds are stated at cost plus accrued interest, which approximates market value. Mortgage and Asset-backed Issues are stated at cost less principle payments made to date, to approximate market value. The Mutual Fund Portfolio is valued at cost plus reinvested interest and dividends.

Note 4. Loans Receivable

The following is a summary of the transactions affecting the loans receivable account for the year:

	1994	1993
Loans Receivable,		
Beginning of Year	$1,783,962	$1,652,210
New Loans	186,042	377,455
Principal Payments	(243,765)	(245,703)
Loans Written Off	(12,000)	0
LOAN RECEIVABLE, ENDING OF YEAR	$1,714,239	$1,783,962
Allowance for Doubtful Accounts,		
Beginning of Year	$ 53,519	$ 49,566
Current Year Provision	9,908	3,953
Loans Written Off	(12,000)	0
ALLOWANCE FOR DOUBTFUL ACCOUNTS, ENDING OF YEAR	$ 51,427	$ 53,519

Note 5. Equipment

Office equipment is recorded at cost and depreciated over its estimated useful life on a straight-line basis.

Intangible assets, such as software, are recorded at cost and amortized over a 60-month period on a straight-line basis.

	1994	1993
Equipment at Cost	$ 1,991	$ 0
LESS: Accumulated Depreciation	133	0
BOOK VALUE	$ 1,858	$ 0
Software at Cost	$ 6,155	$ 0
LESS: Accumulated Depreciation	103	0
BOOK VALUE	$ 6,052	$ 0

Note 6. Related Party Transactions

The Foundation is assessed by the Missouri State Medical Association an annual fee for administrative cost. For the years ended December 31, 1994 and 1993, the Foundation paid the Association $15,000 for administrative costs. The Foundation also reimburses the Missouri State Medical Association for expenses paid by the Association on behalf of the Foundation. This reimbursement for the years ended December 31, 1994 and 1993 was $167 and $403 for printing and meeting expenses.

MSMA Physicians' Health Foundation Financial Statements

REPORT OF MISSOURI STATE MEDICAL ASSOCIATION PHYSICIANS' HEALTH FOUNDATION

December 31, 1994
Jefferson City, Missouri

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of
Missouri State Medical Association
Physicians Health Foundation:

We have audited the accompanying Balance Sheet of Missouri State Medical Association Physicians Health Foundation as of December 31, 1994, and the related Statements of Revenues, Expenses and Changes in Fund Balance for the year then ended. These Financial Statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these Financial Statements based on our audit.

We conducted our audit in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Association Physicians Health Foundation as of December 31, 1994, and the results of its operations for the year then ended in conformity with Generally Accepted Accounting Principles.

The 1993 Financial Statements were reviewed by us and our report thereon dated December 31, 1993, stated that we were not aware of any material modifications that should be made to those statements for them to be in conformity with Generally Accepted Accounting Principles. However, a review is substantially less in scope than an audit and does not provide a basis for the expression of an opinion on the Financial Statements taken as a whole.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 26, 1995

MISSOURI STATE MEDICAL ASSOCIATION PHYSICIANS' HEALTH FOUNDATION

BALANCE SHEET

December 31, 1994 (audited) and 1993 (unaudited)

	1994	1993
ASSETS		
CURRENT ASSETS		
Cash	$ 459	$ 4,757
Accounts Receivable	2,350	0
Prepaid Expenses	840	0
Total Current Assets	3,649	4,757
PROPERTY AND EQUIPMENT		
Office Furniture and Equipment	6,339	0
LESS: Accumulated Depreciation	2,737	0
Total Property and Equipment	3,602	0
TOTAL ASSETS	$ 7,251	$ 4,757
LIABILITIES AND FUND BALANCE		
CURRENT LIABILITIES		
Deferred Income, Contributions (Note 2)	$ 0	$ 6,000
Total Current Liabilities	0	6,000
FUND BALANCE	7,251	(1,243)
TOTAL LIABILITIES AND FUND BALANCE	$ 7,251	$ 4,757

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCE

For the Years Ended
December 31, 1994 (audited) and 1993 (unaudited)

	1994	1993
REVENUES (Note 2)		
Contributions, Cash	$ 66,973	$ 47,361
Contributions, In-kind (MSMA)	61,962	78,642
Service Fees	37,440	22,920
Total Revenues	166,375	148,923
EXPENSES		
Professional Services	$114,674	$112,109
Office Supplies	5,339	4,375
Travel Expenses	9,593	6,635
Telephone	5,767	4,979
Office Rent	3,360	3,766
Contracts Expense	16,660	17,733
Miscellaneous	1,082	945
Bank Service Charge	411	424
Depreciation	995	0
Total Expenses	157,881	150,966
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES	8,494	(2,043)
FUND BALANCE, BEGINNING	(1,243)	800
FUND BALANCE, ENDING	$ 7,251	$(1,243)

The Notes to Financial Statements
are an integral part of these Statements.

MISSOURI STATE MEDICAL ASSOCIATION PHYSICIANS' HEALTH FOUNDATION

NOTES TO FINANCIAL STATEMENTS

December 31, 1994 (audited) and 1993 (unaudited)

Note 1. Summary of Significant Accounting Policies

Organization:

Missouri State Medical Association Physicians Health Foundation was incorporated as a not-for-profit corporation under the laws of the State of Missouri on March 26, 1990.

The purpose of the Foundation is to support and promote quality professional health care through the sponsoring, supporting, initiating, funding, and establishing of the rehabilitation of chemically-dependent or mentally- impaired physicians.

The Foundation is a supporting organization under Internal Revenue Code Section 509 (a)(3). As such, the Foundation has common officers with the Missouri State Medical Association, a Section 501 (c)(6) organization. In addition, the six officers and directors of the Foundation are also directors and members of the Executive Committee of the Missouri State Medical Association.

Basis of Accounting:

The Financial Statements of Missouri State Medical Association Physicians Health Foundation are prepared on the Accrual Basis of Accounting.

Accounts Receivable:

Program service revenues are recognized when billed to participants and charged to accounts receivable. Accounts receivable are stated at face value with no allowance for doubtful accounts as all probable uncollectible accounts have been written off or considered immaterial.

Property and Equipment:

Property and equipment are carried at cost. The Foundation records depreciation on a straight-line basis over the estimated useful lives of the related assets.

Income Taxes:

The Foundation is qualified as a tax-exempt organization under Internal Revenue Code Section 501 (c)(3) and is not generally subject to Federal or State Income Tax.

Expense Classifications:

Certain expense categories previously reported separately for the year ended December 31, 1993 have been combined in the accompanying Financial Statements.

Note 2. Deferred Income

Deferred income is comprised of contributions received from two donors prior to January 1, 1994, in fulfillment of pledges for the year ending December 31, 1994. These funds were recorded as contribution income for 1994.

Note 3. Revenues

The Foundation receives contributions from hospitals, physician groups, insurance companies, and interested individuals. Additionally, the Missouri State Medical Association underwrites a significant portion of operating expenses. Fees are also charged, in a nominal amount, to service recipients.

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REPORT OF
MISSOURI STATE MEDICAL SERVICES, INC.

December 31, 1994
Jefferson City, Missouri

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of
Missouri State Medical Services, Inc.:

We have audited the accompanying Balance Sheet of Missouri State Medical Services, Inc., as of December 31, 1994, and the related Statements of Income, Retained Earnings and Cash Flows for the year then ended. These Financial Statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these Financial Statements based on our audit.

We conducted our audit in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Services, Inc., as of December 31, 1994, and the results of their operations and its cash flows for the year then ended in conformity with Generally Accepted Accounting Principles.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 26, 1995

MISSOURI STATE MEDICAL SERVICES, INC.

BALANCE SHEET
December 31, 1994

	1994
ASSETS	
CURRENT ASSETS	
Cash	$ 42,916
LESS: Cash Held in Trust for Others (Note 2)	(10,500)
Cash, Net	32,416
Accounts Receivable (Note 1)	24,737
Employee Advances	1,500
Total Current Assets	58,653
PROPERTY AND EQUIPMENT (Note 1)	
Office Furniture and Equipment	4,665
LESS: Accumulated Depreciation	467
Total Property and Equipment	4,198
TOTAL ASSETS	$ 62,851
LIABILITIES AND STOCKHOLDER'S EQUITY	
CURRENT LIABILITIES	
Notes Payable (Note 3)	$150,497
Accrued Expenses	2,600
Interest Payable	4,793
Total Current Liabilities	157,890
STOCKHOLDERS' EQUITY	
Common Stock, $1 par value: 30,000 shares authorized; 30,000 shares issued and outstanding	30,000
Retained Earnings	(125,039)
Total Stockholder's Equity	(95,039)
TOTAL LIABILITIES AND STOCKHOLDER'S EQUITY	$ 62,851

The Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL SERVICES, INC.

STATEMENT OF INCOME
For the Year Ended December 31, 1994

	1994
INCOME	
Consulting Fees (Note 1)	$ 80,744
Seminar Fees	7,250
Interest Income	475
Total Income	88,469
EXPENSES	
Salaries and Benefits	$127,220
Meetings and Retreats	29,408
Travel and Entertainment	12,550
Rent	11,574
Telephone	8,504
Printing and Supplies	10,990
Contract and Professional Fees	5,259
Miscellaneous Expense	728
Provision for Bad Debts	2,015
Depreciation	467
Interest Expense	4,793
Total Expenses	213,508
NET INCOME (LOSS) BEFORE TAXES	(125,039)
Provision for Income Taxes	0
NET INCOME (LOSS)	$(125,039)

The Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL SERVICES, INC.

STATEMENT OF RETAINED EARNINGS
For the Year Ended December 31, 1994

	1994
BALANCE, BEGINNING	$ 0
Net Income (Loss)	(125,039)
BALANCE, ENDING	$(125,039)

MISSOURI STATE MEDICAL SERVICES, INC.

STATEMENT OF CASH FLOWS
For the Year Ended December 31, 1994

	1994
CASH FLOWS FROM OPERATING ACTIVITIES	
Operations:	
Net Income or (Loss)	$(125,039)
Adjustments to Reconcile Net Income (Loss) to Net Cash Provided (Used) by Operating Activities:	
Depreciation	467
(Increase) in Accounts Receivable	(24,737)
(Increase) in Employee Advances	(1,500)
Increase in Accrued Expenses	2,600
Increase in Interest Payable	4,793
Net Cash Provided (Used) by Operating Activities	(143,416)
CASH FLOWS FROM INVESTING ACTIVITIES	
Acquisition of Property and Equipment	(4,665)
Net Cash Provided (Used) by Investing Activities	(4,665)
CASH FLOWS FROM FINANCING ACTIVITIES	
Proceeds from Short-term Debt	150,497
Proceeds from Issuance of Common Stock	30,000
Net Cash Provided (Used) by Financing Activities	180,497
Net Increase (Decrease) in Cash	32,416
CASH, BEGINNING OF YEAR	0
CASH, END OF YEAR	$ 32,416

MISSOURI STATE MEDICAL SERVICES, INC.

NOTES TO FINANCIAL STATEMENTS
December 31, 1994

Note 1. Summary of Significant Accounting Policies

Organization:

Missouri State Medical Services, Inc. was incorporated on February 2, 1994, under the laws of the State of Missouri. From inception to present, Missouri State Medical Services, Inc., was, and continues to be, a wholly-owned subsidiary of the Missouri State Medical Association, a not-for-profit corporation under Internal Revenue Service Code Section 501 (c)(6).

The Company receives consulting fees for managerial and advisory services to physician practices. These fees represent substantially all of the Company's income. Additionally, the Company receives fees for presentations of seminars.

Basis of Accounting:

The Financial Statements of the Missouri State Medical Services, Inc., are prepared on the accrual basis of accounting.

Accounts Receivable:

Consulting fees are recorded as revenue and charged to accounts receivable after initial services have been provided and the clients have agreed to proceed with the engagement. Some services are provided initially that may not be charged to the client if no further engagement is agreed upon. Accounts receivable are stated at face amount with no allowance for doubtful accounts at December 31, 1994, as all probable uncollectible accounts have been written off or are considered immaterial.

Property and Equipment:

Property and equipment are carried at cost. Depreciation is recorded on a straight-line basis over the estimated useful lives of the related assets.

Income Taxes:

The Company has an operating loss carryforward of $125,000 that may be offset against future taxable income. If not used, the carryforward will expire in the year 2009.

Note 2. Cash Held in Trust for Others

At December 31, 1994, the Company held in its operating account deposits totaling $10,500. These funds were received from various physicians or physician groups in the St. Louis area for the purpose of establishing a future Management Services Organization (MSO), which would be separate and autonomous from the Company. These funds are being held in trust by the Company and will be disbursed to the prospective MSO or returned. The Company is not liable for interest payments on the funds.

Note 3. Related Party Transactions

Missouri State Medical Association is the parent corporation of Missouri State Medical Services, Inc.. The Association is organized as a not-for-profit corporation under the laws of the State of Missouri, and owns all of the 30,000 shares of capital stock authorized, issued and outstanding of the Company.

The Company has a demand note payable to Missouri State Medical Association in the amount of $150,497 at December 31, 1994, with interest at the rate of 7.75%. The interest rate adjusts annually on January 1st to the prime rate plus 1%.

REPORT OF
MISSOURI STATE MEDICAL ASSOCIATION HEALTH EDUCATION FOUNDATION

December 31, 1994
Jefferson City, Missouri

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of
Missouri State Medical Association
Health Education Foundation:

We have audited the accompanying Balance Sheet of Missouri State Medical Association Health Education Foundation as of December 31, 1994, and the related Statement of Revenues, Expenses and Changes in Fund Balance for the year then ended. These Financial Statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these Financial Statements based on our audit.

We conducted our audit in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used, and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Association Health Education Foundation as of December 31, 1994, and the results of their operations for the year then ended in conformity with Generally Accepted Accounting Principles.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants
January 26, 1995

MISSOURI STATE MEDICAL ASSOCIATION HEALTH EDUCATION FOUNDATION

BALANCE SHEET
December 31, 1994

	1994
ASSETS	
CURRENT ASSETS	
Cash	$ 1,724
Total Current Assets	1,724
TOTAL ASSETS	$ 1,724
LIABILITIES AND FUND BALANCE	
FUND BALANCE	$ 1,724
TOTAL LIABILITIES AND FUND BALANCE	$ 1,724

MISSOURI STATE MEDICAL ASSOCIATION HEALTH EDUCATION FOUNDATION

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCE
For the Year Ended December 31, 1994

	1994
REVENUES (Note 2)	
Contributions, Cash	$ 1,798
Contributions, In-kind (MSMA)	18,346
Total Revenues	20,144
EXPENSES	
Production Expenses	$13,735
Professional Fees	1,000
Office Supplies	1,222
Travel and Meeting Expenses	270
Telephone	313
Dues and Subscriptions	618
Advertising	465
Miscellaneous	440
Other Supplies	357
Total Expenses	18,420
EXCESS OF REVENUES OVER EXPENSES	1,724
FUND BALANCE, BEGINNING	0
FUND BALANCE, ENDING	$ 1,724

The Notes to Financial Statements are an integral part of these Statements.

MISSOURI STATE MEDICAL ASSOCIATION HEALTH EDUCATION FOUNDATION

NOTES TO FINANCIAL STATEMENTS
December 31, 1994

Note 1. Summary of Significant Accounting Policies

Organization:

Missouri State Medical Association Health Education Foundation was incorporated as a not-for-profit corporation under the laws of the State of Missouri on July 25, 1994.

The purpose of the Foundation is to produce thirty (30) minute video tapes to be televised throughout the State of Missouri to educate the general public about health issues.

The Foundation is a supporting organization under Internal Revenue Code Section 509 (a)(3). As such, the Foundation has common officers with the Missouri State Medical Association, a Section 501 (c)(6) organization. In addition, the six officers and directors of the Foundation are also directors and members of the Executive Committee of the Missouri State Medical Association.

Basis of Accounting:

The Financial Statements of Missouri State Medical Association Health Education Foundation are prepared on the Accrual Basis of Accounting.

Income Taxes:

The Foundation is qualified as a tax-exempt organization under Internal Revenue Code Section 501 (c)(3) and is not generally subject to Federal or State Income Tax.

Note 2. Revenues

The Foundation receives contributions from hospitals, physician groups, insurance companies, and interested individuals. Additionally, the Missouri State Medical Association underwrites a significant portion of the operating expenses.

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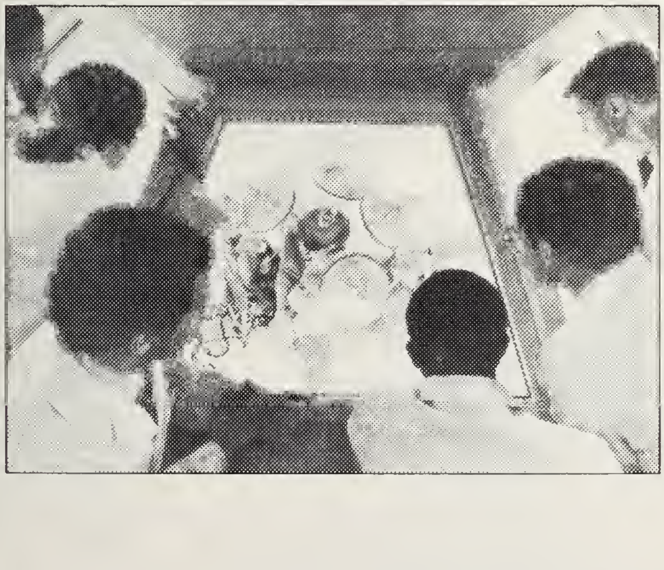

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REPORT OF MSMI, INCORPORATED

December 31, 1994
Jefferson City, Missouri

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of
MSMI, Incorporated:

We have audited the accompanying Balance Sheets of MSMI, Incorporated as of December 31, 1994 and 1993, and the related Statements of Income, Retained Earnings and Cash Flows for the years then ended. These Financial Statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these Financial Statements based on our audits.

We conducted our audits in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the Financial Statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the Financial Statements referred to above present fairly, in all material respects, the financial position of MSMI, Incorporated as of December 31, 1994 and 1993, and the results of their operations and its cash flows for the years then ended in conformity with Generally Accepted Accounting Principles.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants
January 26, 1995

MSMI, INCORPORATED

BALANCE SHEETS

December 31, 1994 and 1993

	1994	1993
ASSETS		
CURRENT ASSETS		
Cash	$20,815	$22,835
Total Current Assets	20,815	22,835
INVESTMENTS - COMMON STOCK (Note 2)	15,000	15,000
TOTAL ASSETS	$35,815	$37,835
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts Payable	$ 2,000	$ 3,000
Total Current Liabilities	2,000	3,000
STOCKHOLDERS' EQUITY		
Common Stock, $10 par value: 3000 shares authorized; 200 shares issued and outstanding	2,000	2,000
Retained Earnings	31,815	32,835
Total Stockholders' Equity	33,815	34,835
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$35,815	$37,835

MSMI, INCORPORATED

STATEMENTS OF INCOME

For the Years Ended December 31, 1994 and 1993

	1994	1993
INCOME		
Interest Income	$ 585	$ 554
Tour Commissions	1,690	5,283
Miscellaneous Income	0	100
Total Income	2,275	5,937
EXPENSES		
Bank Service Charge	$ 55	$ 57
Office Service (Note 3)	2,000	3,000
Professional Fees	1,200	1,120
Taxes, other	40	140
Total Expenses	3,295	4,317
NET INCOME (LOSS) BEFORE TAXES	(1,020)	1,620
Provision for Income Taxes	0	0
NET INCOME (LOSS)	$(1,020)	$ 1,620

MSMI, INCORPORATED

STATEMENTS OF RETAINED EARNINGS
For the Years Ended December 31, 1994 and 1993

	1994	1993
BALANCE, BEGINNING	$32,835	$31,215
Net Income (Loss)	(1,020)	1,620
BALANCE, ENDING	$31,815	$32,835

The Notes to the Financial Statements are an integral part of these statements.

MSMI, INCORPORATED

STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 1994 and 1993

	1994	1993
CASH FLOWS FROM OPERATING ACTIVITIES		
Operations:		
Net Income or (Loss)	$(1,020)	$ 1,620
Increase (Decrease) in Accounts Payable	(1,000)	(1,100)
Increase or (Decrease) in Cash	(2,020)	520
CASH, BEGINNING	22,835	22,315
CASH, ENDING	$20,815	$22,835

The Notes to Financial Statements are an integral part of these statements.

NOTES TO FINANCIAL STATEMENTS
December 31, 1994 and 1993

Note 1. Summary of Significant Accounting Policies

Organization:

MSMI, Incorporated was incorporated on December 11, 1974, under the laws of the State of Missouri. From inception to present, MSMI, Incorporated was, and continues to be, a wholly-owned subsidiary of the Missouri State Medical Association, a not-for-profit corporation under Internal Revenue Service Code Section 501 (c)(6).

The Company receives commissions on tours sold by a travel agency to members of the Missouri State Medical Association. These commissions represent substantially all of the Company's income. Office service expenses are reported on the Accrual Basis of Accounting.

Basis of Accounting:

The Financial Statements of the MSMI, Incorporated are prepared on the Accrual Basis of Accounting.

Note 2. Investments

The Company acquired 4,000 shares of Class A common stock of MOMED Holding Company (originally Missouri Medical Insurance Company) on November 21, 1980. Investments in marketable equity securities are carried at the lower of aggregate cost or market at the Balance Sheet date. Market value of the shares at December 31, 1994 and 1993 was $30,000 and $28,000, respectively, resulting in an unrealized gain of $15,000 and $13,000, respectively.

Note 3. Related Party Transactions

Missouri State Medical Association is the parent corporation of MSMI, Incorporated. The Association is organized as a not-for-profit corporation under the laws of the State of Missouri, and owns all of the 200 shares of capital stock issued and outstanding of the Company.

All office services of the Company are provided or performed by the Association with a fee assessed for such services. For the years ended December 31, 1994 and 1993, this fee was $2,000 and $3,000, respectively, which were due to the Association at December 31, 1994 and 1993, respectively.

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TOPIC: **Current Issues in the Management of DES Exposed Patients - 1995**

SPEAKER: **Dr. Arthur L. Herbst**

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314/361-0313

Decisions in Severe Extremity Trauma

Jeffrey O. Anglen, MD

Advances in the management of severe extremity trauma have allowed treatment of injuries previously resulting in amputation or death. The variety of new techniques and technologies available to the orthopedic traumatologist and the trauma team can lead to functional salvage of limbs if crucial management decisions are made correctly in the course of treatment. Accurate knowledge of the potentials and pitfalls of extremity trauma treatment can help to identify salvageable limbs, as well as those doomed to failure so that costly and painful courses of futile treatment can be avoided.

Early medical texts show that the Hippocratic physicians recognized some of the principle factors in the outcome of injury, such as wound size, fracture stability, and damage to neurovascular structures.[1, 2] Their writings emphasize treatment concepts such as speed, removal of protruding fragments, antiseptic wound dressings, stable fracture reduction without pressure at the wound site, and free drainage of pus; all are principles which still hold true. In ancient times, open fracture led predictably to death from sepsis, and drastic measures were taken to try to preserve life. Cauterization of wounds with hot irons or boiling oil was common. Ambrose Paré, surgeon to the French army in the latter 16th century, developed the surgical principles of wound enlargement, packing and removal of "strange bodies." Nonetheless, until the mid 19th century, open fractures of the lower extremity were treated with amputation, with an overall mortality of 30% according to Malgaigne.[1]

The treatment of open fractures did not significantly improve until Desault's concept of adequate debridement and Lister's theory of antisepsis were combined, during the Russo-Turkish War in 1877.[2] The two concepts, applied together, resulted in a decrease in mortality. During WWI, the principles of wound resection and avoidance of primary closure became firmly established. In the twentieth century, advances in anesthesia, asepsis and antisepsis fluid resuscitation and transfusion, better pre-hospital care, and early fracture stabilization have effected a revolution in care of the injured extremity, to the point where the majority of patients with such injuries can be expected not only to survive, but to return to a high level of function.

Methods of Treatment

The care of the patient with an injured extremity is truly a team activity and requires the participation of a variety of specialists. Coordination and communication are essential. Priorities need to be discussed on each patient, and pre-operative planning is essential. The failure to have protocols previously agreed upon, or to discuss issues like surgical timing or incision placement will lead to suboptimal patient care.

The treatment of open fractures with vascular injury exemplifies the need for close coordination between specialists.[3] The protocol in use at our trauma center begins with initial revascularization by the vascular surgeon with the use of a temporary shunt, followed by irrigation and debridement of the wound and temporary stabilization with an external fixator by the orthopaedic trauma team. Definitive vascular reconstruction can then be performed in a clean wound on a stable extremity. The final phase of the operation would be definitive bony stabilization with the internal fixation method of choice. Having agreed upon priorities and protocol in advance allows us to avoid conflict and miscommunication.

The treatment of the injured extremity can be seen as a series of sequential goals to be met. The first goal is to re-establish, and maximize, oxygen delivery and nutrition supplied to the tissues.[4] This requires fluid resuscitation, vascular injury repair, release of tight osseo-fascial compartments, evacuation of hematoma, and occasionally, ventilatory support.

The second goal is to prevent infection. Consideration of measures to minimize infection begins at the scene of the accident and continues throughout treatment. Rapid transport and emergent surgical treatment, avoidance of unnecessary wound manipulation, protection from further contamination and IV antibiotics are key principles. The most important method of preventing infection is prompt, thorough debridement performed by an experienced member of the surgical team.[4,5] All devitalized tissue and foreign material must be removed, including fragments of stripped cortical bone. The extremity should be prepped and draped anew for any further procedures following debridement.

Irrigation with sterile fluid is important in cleansing the wound.[1] Many surgeons use antibiotics in the irrigation fluid, although there is not conclusive evidence of any additional effectiveness in infection prevention by this measure.[6] Recent studies by the Orthopaedic Trauma Service at University Hospital indicate that irrigation with detergent solution may be more effective at bacterial removal than the traditional antibiotic irrigation. Bony stability is an important concept in preventing infection, as motion between bone ends inhibits capillary ingrowth and contributes to relative vascularity at the fracture. Antibiotics have a significant but small role to play in preventing infection. In one prospective, randomized study of open fractures showed the use of prophylactic systemic antibiotics decreased the rate of infection from 14% to 7%.[4] The duration of antibiotics should be 3 days for grades I and II, and 5 days for grade III wounds.[7] The use of local antibiotics, in the form of the antibiotic bead pouch technique is being investigated at several centers, and has potential as a method of achieving high concentrations of drug in the wound with low systemic levels, and thus a lower rate of drug complications.[8]

Open fracture wounds should never be closed primarily, but soft tissue coverage should be accomplished by one week post-injury in most cases. If the wound is stable and clean, delayed primary closure without tension may be possible; if there is an adequate bed without exposed bone, tendon, nerve or vessels, split thickness skin grafting is appropriate. In some areas, local muscle or fasciocutaneous flaps can be used. Daniel and Taylor's report, in 1973, or successful distant transfer of an island flap by microvascular anastomosis began the era of free flap coverage.[9] Today there are a variety of muscle or composite tissue flaps that can be reliably transplanted to provide soft tissue coverage. Some authors have declared that 90% of soft tissue injuries can be covered by free flap.[10] The success rate varies with experience, but a retrospective study from the Mayo clinic in 1985 revealed a 20% incidence of early technical failure.[11] A successful free flap coverage provides vascular inflow and helps to prevent infection, and promote healing.

The third goal of treatment is to achieve bone healing. This is typically the province of the orthopaedic traumatologist, who will select treatment methods from the many options now available. Whatever methods are used to stabilize the fracture must be performed in such a way as to preserve soft tissue attachments and blood supply. Modern methods of internal fixation, including indirect reduction techniques, intramedullary stabilization, and selection of the appropriate, atraumatic implants contribute to successful bone healing. Surgical techniques for handling traumatized tissues and experience in complex problems of stabilization in an injured extremity are the hallmarks of orthopaedic traumatology. Early bone grafting, by protocol, has been suggested at six weeks post-injury following high energy fractures of the tibia,[12] and early surgical intervention in any high energy fracture that shows signs of delayed or nonunion is indicated. Methods of promoting union include both surgical (open bone grafting, revision of fixation) and non-surgical (bone stimulation, bone marrow injection) techniques.

Frequently, adequate debridement of an open fracture results in significant skeletal defects. Options for managing skeletal gaps include fibular transfer (for defects of the tibia), vascularized fibular transplant, cancellous bone grafting, and segmental bone transport. A vascularized fibula can bridge large gaps with living bone, heals more rapidly than nonvascularized diaphyseal grafts, and can hypertrophy over time.[13,14,15,16]

Nonetheless, it is mechanically weak for a long time; and the procedure is technically demanding and

Continued on page 142

Continued from page 141

has donor site morbidity.[16,17] Cancellous bone grafting can be utilized to bridge substantial gaps. A report by Christian and associates in 1989 concerned cancellous grafting of tibial defects in 8 patients, with an average gap of 10.25 cm.[18] All of those tibias healed in an average of 9 months, although 2 required a second grafting. There were no patients with chronic pain or osteomyelitis, but all had some disability due to stiffness of the ankle.

One of the newer methods of treating bone gaps involves the use of circular wire fixators for gradual transport of bone segments across the gap. First developed by Ilizarov in the Soviet Union, this technique employs the principle of distraction osteogenesis following an initial corticotomy.[19,20] This method allows not only treatment of the nonunion, but correction of deformity, lengthening of some segments of a bone and compression of others. The process is quite technically demanding, treatment is prolonged and often painful, and there is a high rate of complications. Problems can occur in the process, including poor osteogenesis behind the transported segment, delayed consolidation at the "docking site," and soft tissue obstruction by scar or muscle loss. The results can be quite impressive, however, and severely injured limbs can be salvaged. A series of 170 tibial defects reported by Aronovich from Kurgan, showed 70% excellent outcome, defined as union with no deformity, infection or leg length discrepancy.[21] One hundred and fifty-four femoral defects, 1 to 23 cm, were treated by Kuftiryev and associates in Kurgan.[22] Union was achieved in all cases, 147 had no deformity, leg length discrepancy or infection. Paley, in this country, reported on 25 patients with tibial bone loss averaging 6.2 cm, treated using the bone transport method of Ilizarov.[20] He achieved union in all with a mean time to healing of 13.6 months.

Since the initial reports of success with bone segment transport, others have taken the principles and added various technical changes. Transports have been done using half-pin frames, and segments have been transported over unreamed nails, in the so-called "monorail" technique.[23]

Despite our ability to graft blood vessels, reconstruct soft tissue defects, and fill in bone gaps, there are certain injuries that are unsalvageable. In those cases, ill-advised attempts at limb salvage can be prolonged, costly, painful and detrimental to the patient. Even when the limb can be kept alive and the missing tissue reconstructed, the ultimate function obtained may not be worth what it costs the patient to keep the limb.[24] The costs of limb salvage may include years of disability, multiple surgeries, depletion of financial resources, dependence upon pain medication, and disruption of family relationships. Lange and associates[25] in 1985 retrospectively reviewed 23 open tibia fractures with limb threatening vascular injuries. Fourteen of those injuries resulted in amputation, five as a primary procedure and nine delayed. Half of the 12 patients who had attempted revascularization procedures ultimately underwent amputation. They suggested that anatomically complete disruption of the posterior tibial nerve, or a crush injury with warm ischemia greater than 6 hours, should be absolute indications for primary amputation. Relative indications would include polytrauma, complex foot trauma, or an anticipated protracted course of coverage and reconstruction. Caudle and Stern[26] reported on the ultimate outcome of 62 type III open tibia fractures in the *Journal of Bone and Joint Surgery* in 1987. Of nine type IIIC fractures, 7 had undergone secondary amputation due to pain, nonunion, sepsis or failure of vascular repair. The two remaining patients had results classified as "poor." These patients may have been better served with a primary amputation and earlier rehabilitation.

Gregory et al,[27] Howe et al[3] and Russell et al[28] have proposed various numerical scoring systems meant to predict the likelihood of limb salvage. They were based on retrospective studies of 17 (Gregory) to 70 (Russell) patients, and used a variety of clinical indicators such as age, delay to treatment, warm ischemia time, injury severity score, shock, pre-existing conditions, and injury to different tissue types. None of these systems has achieved wide clinical usage.

The MESS or mangled extremity severity score was reported by Helfet et al. in 1990.[29,30] This numerical score was developed from experience in 25 patients with 26 mangled extremities, and was composed of scores in four areas: skeletal and soft tissue injury, ischemia, shock and patient age. It was then applied prospectively to 26 patients, and the results were the same as the retrospective series: a MESS ≥ 7 was 100% predictive of amputation. Other authors have subsequently used the MESS in a similar fashion with similar results.[31]

Despite all of these attempts to develop means of predicting success or failure of limb salvage, questions remain. None of the indices have been used on a large number of patients prospectively, and none have achieved widespread acceptance. Bonanni et al[32] reviewed 58 limb salvage attempts retrospectively and scored them using each of these four scoring systems. None had any better predictive value than chance. They excluded any primary amputations, and thus selected out those patients who had injuries initially judged to be beyond reconstruction. This, of course, is a different population than that examined in other studies which included all severe injuries.

The importance of being able to predict successful limb salvage is emphasized by the fact that patients treated with primary amputation usually do much better than those having amputation after failed limb salvage.[33] Helfet et al[29] found delayed amputation patients had twice the hospital stay (49.8 days compared to 24.3), more surgical procedures (average 6.7 vs. 1.6), more lower extremity infections (6 vs. 0), higher mortality from sepsis (6 vs. 0), and a higher average cost ($30,093 vs. $47,680). Bondurant and associates[34] reported similar findings in a study of 43 open tibia fractures which ultimately were amputated, 14 primarily and 29 delayed. Primary amputations resulted in half the hospital days (22 vs. 53), a quarter the surgical procedures (1.6 vs. 6.9), and less cost ($28,964 vs. $53,462). Six patients in the delayed group developed sepsis and died, compared to none with this complication in the primary group. In addition, 9 patients in the delayed group eventually had conversion of their below knee amputation level to an above knee level, and 15 had stump revision procedures; only one patient in the primary amputation group had any revision surgery, a minor local revision. Since it is a principle of amputation surgery that the lower the level, the better the function,[35] the necessity for revision to a higher level represents a significantly worse result.

Most studies of the success of limb salvage have focussed on avoidance of an amputation as the measure of a successful outcome. However, amputation may not be the only way a limb salvage attempt can fail. The preservation of a stiff, insensate, painful and functionless limb may not be considered a success by the patient. Long term functional results of salvaged extremities and amputees were recently compared in a report by Georgiadis, et al. They retrospectively evaluated 27 patients who had limb salvage with a microvascular free flap and 18 patients who had primary BKA.[10] Follow-up averaged 37 months for salvage patients, and 44 months for amputees. Five of the 27 salvage patients were eventually amputated; as a group they had more complications, more procedures and longer hospitalization than amputation patients. Limb salvage patients had higher hospital charges, a longer time to full weight bearing, were less able or willing to work, considered themselves more severely disabled and had more problems with performance of occupational or recreational activities. The authors felt that there were several reasons for the inferior functional outcome following microvascular free flap salvage of lower extremity injury. First is the fact that although free flaps replace lost soft tissue structurally, they do not replace lost function of muscle, tendon or nerve. Repeated interventions in these patients lead to contractures and restriction of foot and ankle motion. Prolonged hospitalizations and long delay of return to productive activity imposes psychological impairment on top of the physical disability. The patients are "robbed of ambition beyond survival." These authors also pointed out that the psychosocial make-up which often precipitates the injury will persist after treatment and may interfere with rehabilitation. This of course would apply to amputees as well, but the rehabilitation after Below Knee Amputation may be quicker, easier, and less painful than that required after limb salvage.

More information is available on the function of below knee amputees than is the case in the limb salvage population. A study by Purry et al[36] in Injury evaluated by questionnaire a group of 40 patients under 45 years of age who had undergone BKA for trauma. They found that 72% played one or more sports, the same percentage could walk a mile or more, and 84% drove cars. One hundred percent of those without other serious disabilities returned to work, although about 75% returned to a different sort of work (termed by the authors "more intellectual"). Eighty-four percent considered themselves "not very" or "not at all" disabled, and 68% said their lives were very or quite similar to the lives of non-disabled persons. It took a year or longer to reach maximum improvement for 44%, and, surprisingly, 72% of patients had some problem with phantom pain, which improved with time in only half.

An aggressive approach to early amputation in the appropriate patient population may be as important to functional rehabilitation as an similarly aggressive approach to early internal fixation in multiple injured individuals.

Modern techniques and technologies have given traumatologists the ability to salvage some limbs that

Continued on page 144

Continued from page 143

would have been lost in prior eras. However, some limbs that are "saved" are less functional than a prosthesis. It requires not only training and technical skill, but experience and judgement to apply these techniques appropriately. Further studies using prospective predictive indices, and patient-oriented functional outcome measures are needed, and gathering this type of prospective data is one of the ongoing projects of the orthopaedic trauma service.

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Voice Rehabilitation After Laryngectomy

James H. Boyd, MD, FACS, Mark Varvares, MD, and Sean Fitzmaurice, BS

Unfortunately, laryngeal cancer commonly presents at a stage necessitating total laryngectomy. Voice rehabilitation in the past has primarily been with the electrolarynx or esophageal speech. Tracheoesophageal puncture (TEP) is a technique that has replaced the other two methods as the rehabilitative procedure of choice in most total laryngectomy patients. This report details this technique, as well as a brief discussion of the etiology and treatment of laryngeal cancer.

Since the advent of laryngectomy as a treatment for carcinoma of the larynx over 100 years ago, the restoration of functional speech to the patient has posed a challenge to clinicians. The non-surgical options for voice rehabilitation of the post-laryngectomy patient include esophageal speech and the artificial larynx. Unfortunately, most patients fail to develop functional esophageal speech even after intense training. Those who fail to develop esophageal speech are often dissatisfied with the quality of communication made possible by a mechanical electrolarynx. It is our opinion that the surgical option of endoscopic tracheoesophageal puncture (TEP) with prosthetic valve placement, as first described by Singer and Blom in 1980, has proved to be both safe and effective.[1]

Epidemiology of Laryngeal Cancer

According to the Missouri Department of Health, 25% of the adult population smokes cigarettes. Between 1986 and 1991, there were 1,785 new cases of laryngeal cancer reported in Missouri (about 300 cases per year). Nearly all of these lesions occurred in smokers. Therefore, laryngeal carcinoma should appear on the differential diagnosis of many persistent upper respiratory complaints in smoking adults. While laryngeal cancer is relatively rare as a percentage of all malignancies (1.2% of all cancers diagnosed in 1990), making the diagnosis early is important because the disease is highly amenable to cure with less than radical treatment.[2]

Over 90% of malignant laryngeal neoplasms are squamous cell in origin. Tumors occur most commonly in the glottis (the level of the true vocal cords), occasionally in the supraglottis, and rarely in the subglottis. Because the true vocal folds have a paucity of lymphatics, tumors that arise there metastasize late. This, in addition to the fact that glottic tumors produce hoarseness at an early stage, facilitates early detection. This provides a high likelihood of cure of stage I and II vocal cord cancer by either partial laryngectomy or radiation.

The major risk factors for development of upper aero-digestive tract cancer include tobacco smoking and alcohol consumption, which seem to act synergistically in producing the disease. The typical patient is a 50- to 70-year-old man with a long history of tobacco and/or ethanol use, who presents with hoarseness. Any adult patient who presents with a change in voice quality, or hoarseness that persists for longer than two weeks, should be examined for the possibility of laryngeal cancer. This may include indirect (mirror) or direct (endoscopic) visualization of the larynx. Unfortunately, the average patient who is hoarse because of laryngeal cancer sees three physicians and waits eight months before the larynx is examined and the diagnosis is made.[3]

Staging of laryngeal carcinoma is based on the primary tumor size, regional lymph nodes, and distant metastasis (TNM) system of the American Joint Committee on Cancer.[4] Designation of T_1 to T_4 is dependent on vocal cord mobility, and whether the tumor is confined to the site of origin. N_0 to N_3 are assigned according to whether single or multiple nodes are clinically palpable, their size, and their location, ipsilateral or contralateral, to the side of the original tumor. M_0 and M_1 denote the absence or existence of distant metastasis.

Continued on page 146

Continued from page 145

Standard Treatment of Larynx Cancer

The treatment and resultant cure rates for laryngeal cancer are dictated by the clinical stage of the disease at initial treatment. When the tumor is discovered early (i.e., Stage I or II), therapy is designed to preserve the laryngeal integrity to the extent possible, without compromising long term survival. This therapy consists of radiation or partial laryngectomy alone, with cure rates in the 90% range. In more advanced cases, which include tumor spread to adjacent tissues, vocal cord fixation, or lymph node metastasis, total laryngectomy with post-operative radiation therapy is often required for local control. Recently, attempts to treat locally advanced disease, with organ preserving chemotherapy and radiation, have shown promise, but are still in the experimental stage.[5] The traditional role of chemotherapy as palliative treatment of disseminated disease remains the standard but, provides no improvement in survival.

Voice Rehabilitation

After laryngectomy is performed, one of the most critical quality-of-life issues for the patient is voice rehabilitation. Unfortunately, the majority of laryngectomy patients have been unable to achieve adequate communication by speech therapy training in esophageal speech. Despite this, esophageal speech has traditionally been the preferred approach to laryngeal speech rehabilitation. In this technique, the patient is trained to imbibe air into the cervical esophagus, which is then released in a controlled manner. Airflow across opposed mucosal surfaces in the pharyngoesophagus produces vibration, which is then manipulated by the oral structures into understandable speech. The popularity of esophageal speech stems from the fact that it requires no invasive procedures to acquire, and no artificial devices. The problem with this technique is that up to 50% of patients will fail to acquire an esophageal voice, even after months of speech therapy.[6] When they do succeed, the rate, volume, and duration of the patient's speech is limited by his ability to eructate small amounts of air in a controlled manner.

Over the years, various methods have been devised to deal with this problem. Among the non-surgical alternatives is the electrolarynx, well known to many Missouri physicians. This is an electronic instrument that is placed against the neck, which produces a vibratory source to be manipulated into intelligible speech by the oral structures. Unfortunately, the quality of this speech is characteristically mechanical and monotone.[7] Dependence on batteries makes the device oftentimes unreliable. In addition, the device costs from $300 - $800 and is often ineligible for insurance coverage. Clearly, this is not the ideal solution.

In recent years, surgical therapy has been based on the principle that the creation of a tracheoesophageal fistula can allow exhaled air to be diverted into the pharyngoesophagus, thus facilitating the production of esophageal speech (Fig 1). A definite advantage of this approach over traditional esophageal speech is that the source of air is internal (the lungs), which is more natural. Therefore, air flow is limited only by the vital capacity of the lungs, while flow rate and pressure can be controlled by the patient. The resultant vibrations arising from the walls of the pharyngoesophagus provide a more natural sounding voice than an electromechanical source of vibration.

One of the main obstacles to overcome was the danger that swallowed materials might enter the airway through the fistula. In 1978, Singer and Blom[8] developed an endoscopic method for phonatory shunt construction that used a one-way silicon valve, which effectively overcame this danger. This procedure, tracheoesophageal puncture (TEP), is well-tolerated, and can be done in an ambulatory setting for laryngectomy patients who are dissatisfied with their current mode of speech. After endoscopic creation of a TEP fistula, the prosthesis can be placed within two weeks. Speech is then produced by manual occlusion of the tracheostoma, which diverts exhaled air into the pharyngoesophagus. A majority of patients learn effective airflow modulation, breathing patterns, loudness variation, and pitch range without time-consuming training or therapy. Intelligible speech usually results after one or two days of use. Some supervised training for the care and use of the prosthesis is required.[1]

When TEP is performed more than eight weeks after laryngectomy, it is known as secondary TEP. As an alternative, TEP may be performed concurrently with laryngectomy. This is known as primary TEP, and it adds an average of only 15 minutes to the laryngectomy. Both options have similar rates of success. Primary TEP allows the patient to regain speech quickly after total laryngectomy, and eliminates the need for another operation.

The results of voice restoration from this procedure have been impressive. Over 90% of patients regain speech in the initial period following surgery. From this group, there are some who deteriorate due to complications surrounding the tracheostoma or hypopharyngeal stricture. Often, these difficulties can be corrected, with a long term success rate of 88%.[8]

Conclusions

In summary, laryngeal cancer is a disease well controlled at an early stage with conservative surgery or radiation. Later staged disease often requires total laryngectomy for local control. New attempts at organ preservation with chemotherapy and radiation are promising, but remain experimental. For total laryngectomy patients, tracheoesophageal puncture (TEP) and prosthesis placement is a simple, reliable, cost-effective way to restore speech formation.

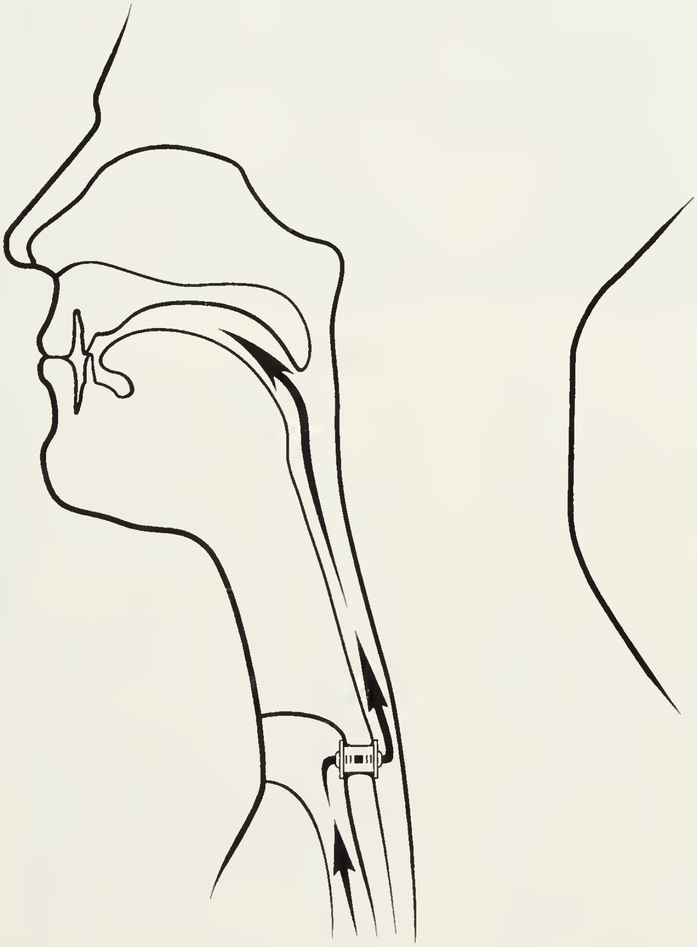

Figure 1. Diagramatic representation of the tracheoesophogeal puncture location and resultant airflow with occlusion of the tracheostome.

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March is Medical Alliance Month

Claire "Sunny" McCown, President of St. Louis Metropolitan Medical Society, demonstrating helmet use to a fifth grade class.

The Missouri State Medical Association Auxiliary was founded in 1924 to provide health education and resources to improve the health of Missourians. The members of the retitled MSMA Alliance have many of the same concerns of the founding members: improving the health of their communities through projects; assisting the Missouri State Medical Association with the legislative agenda; supporting medical education and research; and providing a social network for medical families.

Across the state Alliance members are developing educational health projects and raising funds for AMA-ERF and for existing community programs.

Boone County Medical Society Alliance health projects include the Boone County Family Health Center, an indigent care clinic open weekdays. It is supported by Columbia hospitals and the public health department. The patient population is 2,800 (500+ patient visits per month). It recently expanded space to add new weekly services for teen parents and their infants. The alliance funding has been used to purchase children's furniture, toys, magazine subscriptions and artwork for the clinic's locations. Alliance members also serve as clerical and nursing volunteers.

Alliance Day at the Legislature brings several Alliance members and physicians to the Capitol Building every year to meet with their legislators.
Rep. Carl Hendrickson talking with Kathie Hazuka, Millie Bever and Darlene Bonsanti.

Members are also using Organella, a 4' soft sculptured doll with removable organs, used to educate 55 kindergarten classes in 19 schools. Children receive bandages, stickers and a handout with basic health information. The presentations received publicity from the newspaper and a local TV news program.

Buchanan County Medical Society Alliance has renovated and furnished a room for teens and preteens at the YWCA abuse shelter. They printed 5,000 crisis intervention cards for distribution to abuse victims. They also held a baby shower to collect gifts for unwed pregnant teens living at a local support center. The money they raise will be divided between the abuse shelter, a home for pregnant teens and to an Open Door Food Kitchen. They will also promote helmet safety to the local media this month.

Butler-Wayne-Ripley-Carter Alliance held a Doctors' Day garage sale fund-raiser. Money raised will be donated to the city's new nature walking trail in honor of local physicians. During February Heart Month they held a discussion of new advances in the understanding of cardiovascular health of women. They also held a hands-on skills refresher class for their membership to learn and practice CPR .

Cole County Medical Alliance produced and distributed 1,200 youth hotline cards to area high school students. They provided health and beauty aids as well as baby goods, clothing, and toys, to the local rape

Sandra Mitchell

Jan Meyer

Jean Wankum

The MSMA Alliance is proud to have dedicated leaders be recognized at the national level. **Sandra Mitchell** *has been nominated president-elect of the AMA Alliance.* **Jan Meyer** *is currently president-elect of the Southern Medical Association Alliance and will become president this Fall. The current president of the MSMA Alliance,* **Jean Wankum**, *has been appointed to the AMA Alliance Health Committee.*

and abuse crisis center. In celebration of Doctors' Day members are raising money to purchase bicycle helmets for distribution and a member's spouse who is a head injury specialist will appear on a local TV program. Members will also speak about helmet safety at PTA meetings. Baskets consisting of a bicycle helmet, knee & elbow pads, water bottles, bike lock and reflectors were made and given to the American Heart Association and the YMCA silent auctions.

Members have donated 95 hours of respite service to the Missouri River Home Health and Hospice and 144 hours were volunteered to the meals on wheels program.

Franklin-Gasconade-Warren is focusing a Doctors' Day Helmet Safety project on first through third graders in ten local elementary schools. They have developed a card featuring a dinosaur which can be colored with the SAFE Kids' message, "Use your helmet, not your head." They attached dinosaur bone candy to the educational to make it popular with the kids.

Greene County is focusing on breast cancer. The Community Clinical Oncology Program is involved in the Breast Cancer Prevention Trial involving 54 people in southwest Missouri. While the trial medication is provided to participants by the study, the exams are not. Contributions made in honor of Doctors' Day will help pay for the required tests.

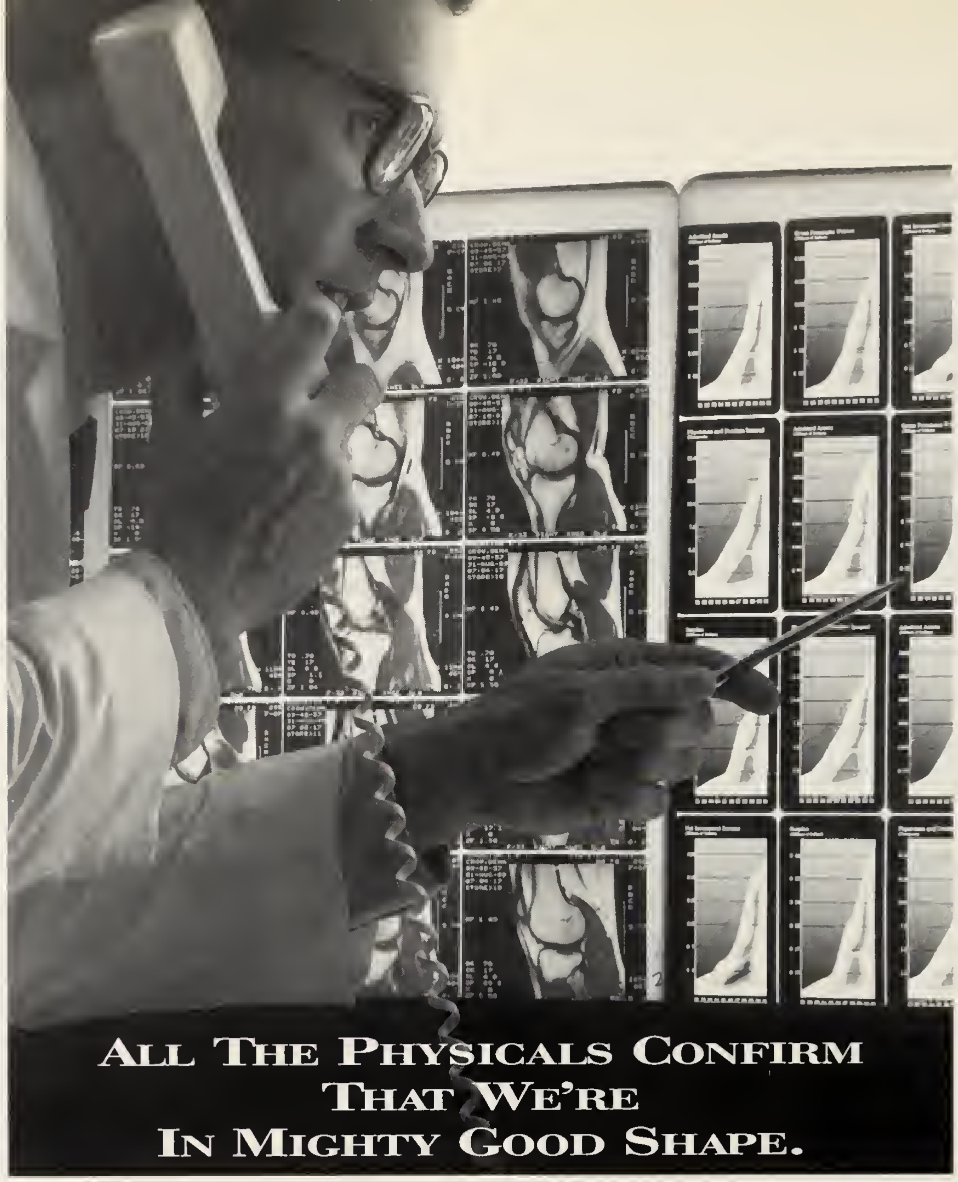
This year Greene County offered a program on illness and stress in the medical family to its members. They also support several community projects including a local children's home, a homeless women's shelter and a free medical clinic. Educational activities include presentations to over 2,000 students about nutrition, teenage pregnancy, substance abuse, AIDS, and sexually-transmitted diseases. They also hold Health Kids' Klass for four and five year olds to discuss nutrition, child safety, and visiting the doctor and provide the parents with information about lead poisoning, healthy snacks and immunization schedules.

Jasper County Alliance members raised money for a women's shelter, community health clinic and crisis pregnancy center. Their third semi-annual Mini Internship Program - community leaders share a day of practice with a physician - involved nine interns and 23 doctors. It was so popular that 21 interns will participate in the next program. They also distributed youth yellow pages to high school students and bicycle helmet safety brochures to kindergarten students.

The St. Louis Metropolitan Medical Society Alliance joined national and state government agencies in making health education a priority. The Alliance teamed with the St. Louis Metropolitan Medical Society and other local agencies to instigate a teen pregnancy prevention program. Normandy School District has agreed to take part in the program.

In response to teen violence, the medical society, Alliance and the Women's Self Help Center came together to create a brochure addressing violence and teen dating. Currently, the Alliance has received commitments from local high schools to distribute the materials. In late January the Greater St. Louis Girl Scouts were approached by the Alliance and indicated interest in distribution to its troops. In return, there was discussion of having the Alliance as a partner in a United Way proposal to address teen violence to be submitted in the near future.

Members-at-Large often organize and complete projects that can be done by one person. Members assist with red cross blood drives, volunteer for community projects, and provide educational materials to local schools on health issues such as no smoking campaigns and skin cancer awareness. MoMed



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100 Years Ago

A paper presented at the 38th Annual Meeting of the Missouri State Medical Association held in the opera house, Hannibal, Missouri, May 21, 1895.

Some Surgical Sins *(excerpt)*

By Emory Lanphear, MD, PhD, St. Louis, Missouri

Third Sin - Failing to Operate in Depressed Fractures of the Skull.

Until quite recently it has been the teaching of the schools to leave all fractures of the skull severely alone, unless some grave symptom demanded operation, regardless of depression. This was because there was more danger (before the days of antiseptic surgery) in opening up wounds of the head than in leaving them alone. And in these degenerate days, when even a Joseph Lister takes a pocket case from his pantaloons, removes a knife, automatically dips it in carbolic solution and proceeds to operate, I am not sure but the old doctrine is still a pretty good rule to follow - for some operators. Indeed, I have recently seen some American surgeons who pretend to be moderately clean (more of which later) that I would not trust inside of my head. But presuming that every community now has at least one physician sufficiently familiar with antisepsis and asepsis to keep his professional brethren of the neighborhood from picking his instruments out of the solution to examine their construction (a thing that not infrequently has happened to me, and not always in the country, either), I must insist upon the future observance of Agnew's rule: every depressed fracture of the skull should be operated upon regardless of the amount of depression and irrespective of pressure symptoms. The reason for this is that nearly fifty percent of serious injuries to the frontal region, when untrephined, terminate in epilepsy or insanity, nearly all of which sequelae can be prevented by operation at the time of accident. It is not good practice to wait for the nervous symptoms to arise and then operate. The way to cure traumatic epilepsy is to prevent it; also, traumatic insanity.

But many men do not do this, especially in the country - why, I do not pretend to say. Timidity perhaps, possibly fear of censure if the patient dies after operation; and of legal complications in accidents of homicidal origin. The latter often deters surgeons oftener than justifiable, in all sorts of injuries - not to the head alone. And there are probably other reasons, be that as it may, I know that many cases of depressed fracture are still left untrephined, for I meet such cases quite often, and recent ones, too. Doctors are too afraid of urging operation in such cases in opposition to the wishes of relatives and friends, and continue in charge of the case in spite of the whisperings of conscience that a wrong has been done in not insisting upon operation or quitting the case. I have little respect for the man who has not the courage to live up to his convictions. But loss of dollars and of custom, and of influence and of friendship, even, is a powerful salve for a bleeding conscience; and so the skull isn't raised, and the doctor who knew better but didn't dare, remains in charge, and an incurable epilepsy or an insanity is put to the debit side of his account for settlement in the great hereafter!

Let us see. Here is a case in point: P.G. was 52 years of age at the time he was kicked upon the forehead by a mule. There was a depressed fracture of the frontal bone in the median line just at the margin of the hairy scalp; but as he fell into the hands of a "conservative" surgeon who believed that a depressed fracture should not be operated upon unless profound symptoms of pressure are present he was not trephined, because he was unconscious but a few moments and very soon went about his business as if the injury were of no consequence. If a progressive surgeon had been called, who believed that every depressed fracture of the skull should be subjected to operation at the time of injury, however slight the depression, and irrespective of pressure symptoms, the most disastrous consequences might have been averted; for very soon a most remarkable change occurred in the patient. Before the accident he was an exemplary husband, and devoted father; a strong opponent of intoxicating liquors and a Christian gentleman; noted for his integrity and excellent character. But soon it was seen that his character was totally changed - he deserted his wife and sought

Continued on page 153

CME Calendar

March

10 - *Springfield*: Pediatric Advanced Life Support Provider Course. 15 credit hrs. Call Julie Hartley 417/885-6111.

10 & 11 - *St. Louis*: Surgery of the Ankle and Foot. Call CME 314/577-8167 or 1-800-553-2712.

11 - *Topeka, KS*: Clinical Psychopharmacology Review & Update: Antipsychotic & Mood-Altering Treatments. 6 credit hrs. Call Menninger 1-800-288-7377.

11 - *Kansas*: Religion and Psychiatry: Utilizing Religous and Spiritual Aspects in the Psychotherapeutic Process. 6 credit hrs. Call Menninger 1-800-288-7377.

12 thru 15 - *California*: The Race To Excellence. 14 credit hrs. Call 202/728-0506.

15 thru 17 - *Kansas*: Transforming Care: Preserving Excellence. Call Menninger CME 800/288-7377.

16 & 17 - *St. Louis*: Clinical Pulmonary Update. 13 credit hrs. Call Washington University 314/362-6893.

16 thru 18 - *St. Louis*: Otoendoscopy and Temporal Bone Dissection. Call CME 314/577-8167 or 1-800-553-2712.

23 - *St. Louis*: Pediatric Advanced Life Support Renewal Class. 7 credit hrs. Call Mary Beth Foerstel 314/577-5385.

23 thru 26 - *St. Louis*: Subcranial Approaches to Skull Base. 28 credit hrs. Call 314/577-8167 or 1-800-553-2712.

24 thru 26 - *Osage Beach*: Mental Health in Long Term Care. 13 credit hrs. Call Jane Colt 314/577-8726.

25 - *Washington*: Substance Abuse '95: Programs in Policy and Practice. 5.5 credit hrs. Call Martha Cosgrove 202/994-4536.

29 thru 31 - *St. Louis*: Noninvasive Diagnosis of Vascular Disease. 314/569-6290.

29 thru April 1 - *Kansas*: Group Psychotherapy: An Experiential Workshop. 19 credit hrs. Call Menninger 1-800-288-7377.

30 thru April 1 - *St. Louis*: Abusable Medications and Clinical Challenges. 23.5 credit hrs. Call 314/362-2432.

31 *Washington, DC*: Reflux and Ulcer Disease. Advanced Laparoscopy Course. Call Maria Gorrick 202/994-4285.

31 thru April 1 - *St. Louis*: Face Lift. Call 314/577-8167 or 1-800-553-2712.

April

4 & 5 - *St. Louis*: Transesophageal Echocardiography. 13 credit hrs. Call Dianne Reid 314/577-8897.

5 thru 8 - *San Francisco, California*: Annual Scientific Sessions of the International Society for Heart & Lung Transplantation. Call CME 314/577-8167 or 1-800-553-2712.

6 thru 8 - *St. Joseph*: 12th Annual Cardiac and Critical Care Conference. 16.5 credit hrs. Call Kelly Stuck 816/271-1225.

7 - *Virginia*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth M. Paul 816/932-2301.

7 & 8 - *St. Louis*: Advanced Trauma Life Support Provider/Provider Refresher Course. 16/9 credit hrs. Call Joyce Hope 314/577-8802.

7 & 8 - *Topeka, KS*: Dyslexia: Assessment & Clinical Management of Language-Based Disorders. 12 credit hrs. Call Menninger CME 1-800-288-7377.

7 & 8 - *St. Louis*: Neurosurgical Endoscopy. 14 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

7 - 9 *Arlington, Virginia*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth Paul 816/932-2301.

8 - *Columbia*: Oncology Conference. Call Laurie Seigel 314/882-4105.

9 - *Virginia*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth M. Paul 816/932-2301.

10 - *St. Louis:* Leroy Sante Lecture. Call R. Gilbert Jost, MD 314/362-7130.

20 & 21 - *St. Louis*: 27th Annual Matt Weis Symposium. 11 credit hrs. Call Judy O'Guin Brandes 314/569-6290.

21 & 22 - *Kansas*: The Trauma Victim in Partial Hospitalization. 12 credit hrs. Call Menninger CME 1-800-288-7377.

21 thru 24 - *St. Louis*: Surgery of the Hand and Wrist. Call CME 314/577-8167 or 1-800-553-2712.

25 - *Topeka, Kansas*: Understanding & Utilizing the Explosion in Antidepressant Pharmacotherapy. 7 credit hrs. Call Menninger 1-800-288-7377.

24 thru 28 - *St. Louis*: The Medicolegal Death Investigator Training Course. 33 credit hrs. Call Mary Fran Ernst 314/522-6410, ext. 6509.

25 - *Kansas City*: Perinatal Core Curriculum. 5 credit hrs. Call Carol Osborne 816/932-3737.

28 & 29 - *St. Louis*: Periorbital Repair and Reconstruction. Call CME 314/577-8167 or 1-800-553-2712.

29 - *Kansas*: Integrated Treatment of Anxiety Disorders. 6 credit hrs. Call Menninger CME 800/288-7377.

May

2 - *Kansas City*: Neonatal Core Curriculum. 5 credit hrs. Call Carol Osborne 816/932-3737.

2 thru 4 - *St. Louis*: Cervical Spine Fracture Fixation. Call CME 314/577-8167 or 1-800-553-2712.

4 thru 7 - *St. Louis*: Comprehensive Review in Toxicology. 20 credit hrs. Call 1-800-443-3901.

5 thru 7 - *St. Louis*: Lumbar Spine Fracture Fixation. Call CME 314/577-8167 or 1-800-553-2712.

8 - *St. Louis*: Transjugular Intrahepatic Porto-systemic Shunts (TIPS). Call R. Gilbert Jost, MD 314/362-7130.

8 - *Columbia*: Oncology Conference. Call Laurie Seigel 314/882-5666.

9 thru 11 - *St. Louis*: Color-Flow Doppler Echocardiography. 20 credit hrs. Call: Dianne Reid 314/577-8897.

10 thru 12 - *St. Louis*: Pediatric Advanced Cardiac and Trauma Support for Life. Pediatric Advanced Life Support Provider Course. 20 credit hrs. Call Mary Beth Foerstel 314/577-5385.

11 & 12 - *Overland Park, Kansas*: Current Management in Critical Care. Call Linda Smutz 816/523-3383.

11 thru 14 - *Florida*: Health Care Delivery Networks: Physician Integration. 11 credit hrs. Call CME 314/577-8167.

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12 & 13 - *Kansas City*: **Radiation Head and Neck.** 10 credit hrs. Call Carol Osborne 816/932-3737 or 816/932-5119.

12 & 13 - *St. Louis*: **2nd Annual Current Topics in Cardiothoracic Anesthesia.** 14.5 credit hrs. Call 314/362-6893.

15 thru 20 - *St. Louis*: **Health Care Ethics in a Pluralistic Society: The Catholic Perspective.** 32.5 credit hrs. Call Donna Troy 314/577-8195.

26 - *Springfield*: **Neonatal Resuscitation Course.** 6.75 credit hrs. Call Julie Hartley 417/885-6111.

JUNE

2 - *St. Louis*: **Harkins Lecture.** 4 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

7 thru 9 - *Maryland*: **Third International Symposium on Maritime Health.** 14 credit hrs. Call Karen Mayer 202/994-3921.

7 thru 10 - *Washington, DC*: **Second Annual Intensive Review of Internal Medicine.** Call Deborah Grant 202/994-4285.

8 thru 11 - *Osage Beach*: **MAFP 47th Annual Meeting.** 18+ credit hrs.

9 & 10 - *Columbia*: **Common Childhood Problems.** Call Laurie Seigel 314/882-5666.

9 & 10 - *Kansas City*: **Refractive Surgery: Controversies and New Frontiers - An International Symposium.** Symposium, 12 credit hrs. Wet lab, 3 credit hrs. Call Sue Dunphy 816/881-6153.

9 & 10 - *St. Louis*: **9th Annual Frontiers in Endourology. Advanced Laparoscopic Urology: The Best of the Present.** Call 314/362-6893.

12 thru 17 - *St. Louis*: **Health Care Ethics in a Pluralistic Society: The Catholic Perspective.** 32.5 credit hrs. Call Donna Troy 314/577-8195.

14 - *Springfield*: **Pediatric Advanced Life Support.** 7 credit hrs. Call Julie Hartley 417/885-6111.

17 thru 21 - *Minnesota*: **17th National Lesbian and Gay Health Conference and 13th Annual AIDS/HIV Forum.** Call Todd Belfield 202/994-4285.

21 & 22 - *St. Louis*: **Advanced Trauma Life Support Provider/Provider Refresher Course.** 16/9 credit hrs. Call Joyce Hope 314/577-8802.

21 thru 23 - *St. Louis*: **The Sixth Annual Summer Geriatric Institute.** Call Sue Wheat 314/577-8462.

23 & 24 - *St. Louis*: **Neurosurgical Endoscopy.** 14 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

24 thru 28 - *Virginia*: **Third Annual Board Review in Family Medicine.** 39 credit hrs. Call Maria Gorrick 202/994-4285.

25 thru 29 - *Wyoming*: **Allergy and Endoscopic Sinus Surgery Update in the Tetons.** 31 credit hrs. Call Laurie Seigel 314/882-4105.

26 thru 28 - *St. Louis*: **Pediatric Advanced Cardiac and Trauma Support for Life, Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel 314/577-5385.

JULY

27 - *St. Louis*: **Pediatric Advanced Life Support Renewal Class.** 7 credit hrs. Call Mary Beth Foerstel 314/577-5385.

29 & 30 - *Springfield*: **Pediatric Advanced Life Support Provider Course.** 17.4 credit hrs. Call Maryann Jeter, 800-835-5201.

Historical Record, continued from page 151

the companionship of prostitutes; he was so abusive to this children when at home that they fled him in terror; he became so addicted to the use of whisky that he soon wasted his property and sunk to the level of the drunken sot, as often found in the gutter as in bed; he cursed and swore and seemed to lose all sense of manhood and decency - he was so obscene, vulgar and debased. This condition continued for a period of more than three years with occasional intervals in which it was thought he was going to "reform'" finally, after a long debauch, suicidal and homicidal impulses became predominant, and at last the relatives consented to the operation. Upon removing the depressed bone a large fragment of the vitreous plate was found projecting through the dura an inch or more into the frontal lobes. The superior longitudinal sinus was crushed and filled with organized blood clot, and much of the middle frontal convolutions showed signs of pressure but no decided degeneration. There was little shock and no meningitis following this extensive operation. A marked quietness instead of constant restlessness was the first change noticed in the mental condition; the countenance became more serene, the voice less course. As convalescence progressed it was found that the patient was more like his former self - he greeted his wife and children with a pleasant smile and kind words instead of scowls and curses. And when bodily health was completely restored he became his old self once more; gentle, affectionate and trustworthy. This improvement was not temporary. More than two years have elapsed, and his mental condition is as good as before the accident. He recalls the incidents of his mad career as one remembers a vivid dream, shuddering at the horrid recollection and trying to forget the terrors in the pleasant realities of the present.

Now there was a triumph of surgery, to be sure. But supposing this man had not fallen into the hands of one who could restore him; or that he had died while yet in his iniquity? If what the theologians tell us be correct, would not the doctor who failed to do his duty be held responsible for this soul's eternal torment? But - religion aside - from a purely ethical standpoint, has a doctor the moral right to commit this "third sin?" MoMed

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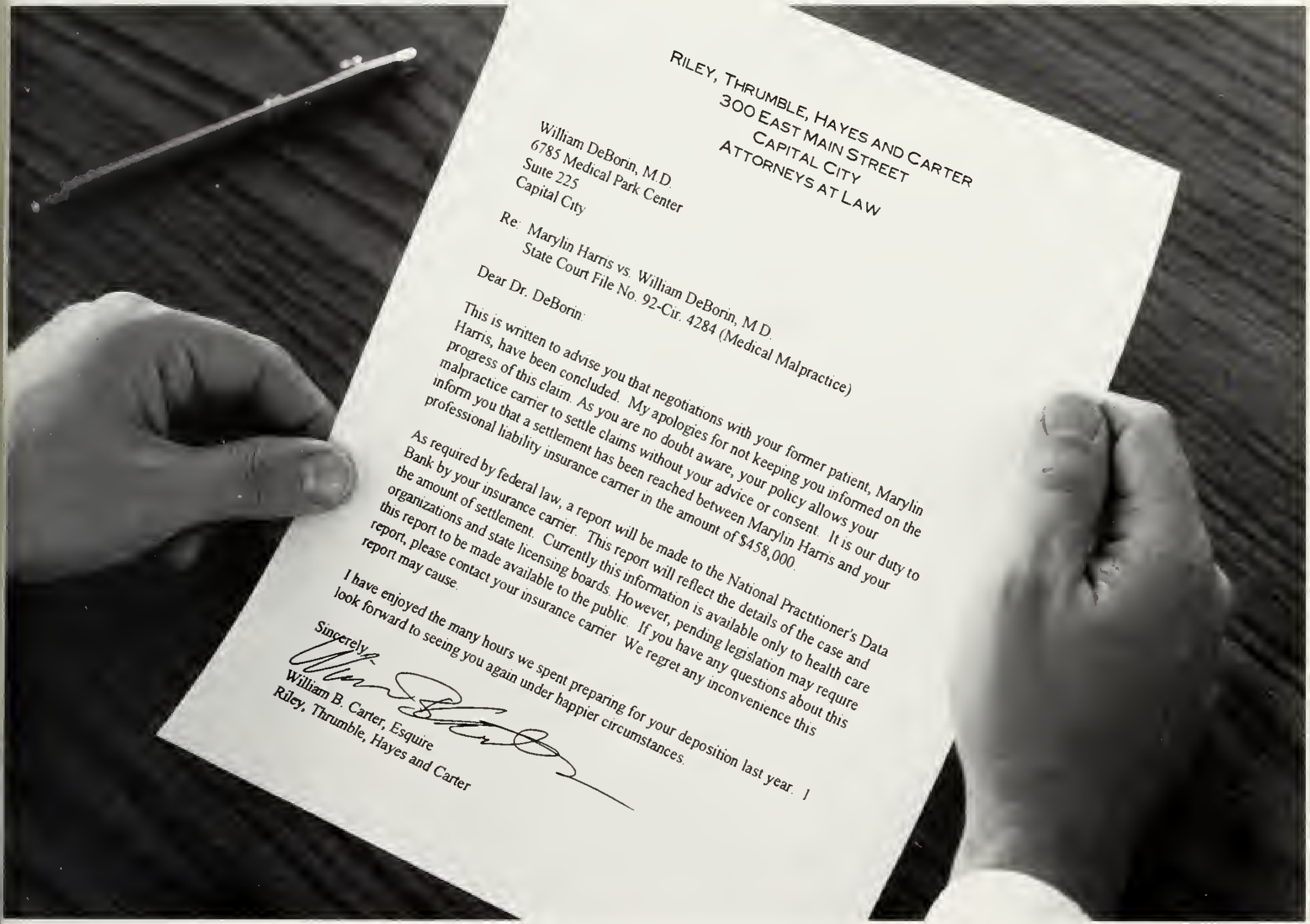

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William DeBorin, M.D.
6785 Medical Park Center
Suite 225
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Re: Marylin Harris vs. William DeBorin, M.D.
State Court File No. 92-Cir. 4284 (Medical Malpractice)

Dear Dr. DeBorin:

This is written to advise you that negotiations with your former patient, Marylin Harris, have been concluded. My apologies for not keeping you informed on the progress of this claim. As you are no doubt aware, your policy allows your malpractice carrier to settle claims without your advice or consent. It is our duty to inform you that a settlement has been reached between Marylin Harris and your professional liability insurance carrier in the amount of $458,000.

As required by federal law, a report will be made to the National Practitioner's Data Bank by your insurance carrier. This report will reflect the details of the case and the amount of settlement. Currently this information is available only to health care organizations and state licensing boards. However, pending legislation may require this report to be made available to the public. If you have any questions about this report, please contact your insurance carrier. We regret any inconvenience this report may cause.

I have enjoyed the many hours we spent preparing for your deposition last year. I look forward to seeing you again under happier circumstances.

Sincerely,

William B. Carter, Esquire
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April 1995

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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MISSOURI MEDICINE

VOLUME 92, NUMBER 4

The Tax Man Cometh... 176
Sidney A. Dulle, CPA and Larry L. Harris, CPA

IRS Offers Tax Information 178

Mutual Fund Investing: Keeping Track May Keep Taxes Down 182
Matthew Taheri, Investment Advisor

On the Cover: When a tax shelter springs a leak, unweary investors may be headed for a rough landing in a sea of troubles. "Taking A Bath In Troubled Waters" takes on a whole new meaning when the hungry tax creatures begin their annual April 15th feeding frenzy. The 3-D 16"x20" mixed media piece was constructed by Dennis Weiser.

Editor's Desk

"Writing It Right" 162
J. Regan Thomas, MD, Editor

Frederick Hahn Jr., MD, FACS, MSMA President 165

Nona Nan Chapman, MSMA Alliance President 167

Otolaryngology Quiz #3 169
Gregory Renner, MD & Robert P. Zitsch III, MD

Perspectives

Community-Based Teaching of General Internal Medicine to First Year Medical Students 184
J. Christopher Bauer, M-2 University of Missouri-Columbia

Scientific Section

Stereotactic External Beam Irradiation Using A Linear Accelerator: The Washington University Experience 188
Joseph R. Simpson, MD, Keith M. Rich, MD, Robert E. Drzymala, PhD
Todd H. Wasserman, MD, Eric E. Klein, MS, Martha Michaletz-Lorenz, CMD,
Janet Maurath, RTT, and Eric Filiput, RN

Post Tympanostomy Otorrhea 193
Walter A. Schroeder, Jr., DO, MD, FACS

Letters to the Editor 164
Membership Notes 172
Info for Contributors 187
Historical Record 198
CME Calendar 200
Classified Listings 202

"Writing It Right"

J. Regan Thomas, MD, Editor

I previously urged all physicians through this editorial page to become active in legislative affairs of the state. The 88th General Assembly is well into its process now and some key issues affecting medical practice and patient care are being actively debated. As I mentioned in that editorial, direct contact and conversation with your representatives is always the most effective, however, there is also an important role for the written word. Your letters and communications with elected officials' offices also influences their actions and you should utilize these opportunities likewise. You will be pleased that your input can be influential in the discussion of these potential laws and regulations and most people are pleasantly surprised as to the amount of response that they obtain. Part of our job as interested "physician-citizens" is to help enlighten and educate our lawmakers on issues related to medical practice and patient care.

The MSMA recently mailed a directory of the representatives and senators both on the state and national levels. If you have problems identifying your appropriate representative, you will find that a call to the MSMA will be a good resource. Just as in situations where you are meeting with your elected official, there are also some helpful hints that make writing them more effective as well. I have listed some do's and don'ts that most individuals have found appropriate in writing legislators.

First, to make your letter effective, be sure that it is mailed directly to your specific representative or senator. Most of these individuals have large amounts of mail coming into their offices and there are a few tricks that may help ensure that your letter is read. My personal suggestion is to contact the staff person who handles the issue in question. The representative or senator often defers these issues to the staff person anyway. Importantly too, is the fact that the staffer receives less specific mail and so a letter addressed to that individual staff person is more likely to be read immediately. Prior to mailing your letter, it would be helpful simply to call the legislator's office and inquire as to the staff member's name. You may find that your letter gains maximum impact if you send it to the attention of the staffer who is most likely to be working with your representative or senator.

Within the letter itself, make sure that your opening sentence indicates the exact issue about which you are writing. In fact, a good trick is to, after the salutation, on the next line, write in capital letters "SUBJECT: LEGISLATION CONCERNING..." This helps ensure that the letter is routed to the right individual without remaining in a stack to be sorted at a later time. It also helps ensure that the letter is not passed on to the wrong staff person which could be disastrous if the area of your concern is on a quickly moving piece of legislation.

Also within the content of the letter, be sure and note that you are a voting resident of your senator's or representative's district. They will be more responsive to mail "from home."

As in all business letters, it is important that the letter be brief and to the point. Ideally, you should keep your letter under one page. A general rule of thumb is the longer the letter, the less likely it will be read. You would like to have the opportunity to have a specific response from your letter, rather than a form letter returned to you. Most would agree that if your letter covers more than one issue, it looses its effectiveness. It would be better to send separate letters for separate pieces of legislation rather than combining them into one longer piece of mail. Often, staff people are simply too busy to route your letter to multiple individuals for partial answers to each portion of the letter. It also is a good idea to end or finish the letter with something like, "will you be able to support my view on this issue?"

I think it is always important to show the appropriate courtesy to your representative or senator as well. Be sure and thank your legislator for taking the time to consider your views and to show your appreciation for their attention. You may feel that these people work for you, and that's true. However, congenial interpersonal interaction and common courtesy will go a long way to a favorable result.

Most individuals agree that a form letter or a pre-printed xerox type letter is significantly less effective than an individual note or correspondence. Even if it is an organized group mailing, you are better off to take a few minutes and write your own personalized letter rather than to send in a form-like communication.

Telegram and mailgrams can also be effective. They have a certain drama about them and convey a sense of urgency and will usually be noticed in the legislator's office. Because these are necessarily short in length, it again is vital that your first few words highlight the issue or piece of legislation that is of concern. For best effectiveness, it should be short and a meaningful message should be conveyed if using this format. It's probably most helpful to use the telegrams or mailgrams at the latter stages of deliberation on a legislative issue, perhaps when a vote is eminent. This again carries a certain sense of urgency with it. However, it's not a good medium to educate the legislator and a letter usually serves you better.

Finally, it is particularly important that you follow the progress of the issue that you addressed. As soon as you find how your legislator voted on the issue, be sure and write or call and tell them that you are aware of the stand they took. Thank them if they voted as you suggested. If they voted the opposite way, be sure and let them know that you are aware of it and are disappointed, however, you should offer yourself as a resource for issues of similar nature in the future. If you had contact with a staff person in the legislator's office, be sure and send them a separate note or give them an individual call. Their feelings count and again, in many offices, dealing with the staff person is as helpful as dealing with the legislator directly. It should be reiterated that you probably have a lot more clout than you realize. Your influence on your legislator is probably greater than you have expected in the past. By following a few practical rules of etiquette coupled with a bit of "political know-how" you can serve yourself as well as your community. MoMed

Legislative Letter Writing:

The DO's

1. **DO** write your legislator whenever you have concern or special interest about a specific issue.
2. **DO** utilize the staff person in charge of the question. Its helpful to address it directly to their attention.
3. **DO** describe the piece of legislation or the legislative issue of concern immediately at the beginning of the letter.
4. **DO** remind your senator or representative that you are a voting resident of their district.
5. **DO** be sure the letter is brief and try to keep it to one page or less.
6. **DO** confine your letter to one issue per letter.
7. **DO** remember to thank your legislators for their attention and consideration.
8. **DO** remember to follow up with the staff person as well as the legislator to let them know you paid attention to how they voted on the issue.

The DON'Ts

1. **DON'T** procrastinate or fail to contact your representative on an issue of concern.
2. **DON'T** use a lot of introductory rhetoric. Get right to the point and let them know the issue.
3. **DON'T** discuss more than one issue per letter and keep the letter as short as possible.
4. **DON'T** forget to ask if the legislator can "support your view on this matter."
5. **DON'T** use form letters or pre-printed xerox forms. It's always more effective to take a few minutes to write a personal letter.
6. **DON'T** overlook the use of telegrams and mailgrams as the issue is close to a vote. These make great follow-up contacts.
7. **DON'T** be adversarial or antagonistic. A negative approach rarely makes the same impact as a positive, supportive one.

To the Editor:

Patients who survive to adulthood with congenital cardiovascular defects are in many ways quite unique and they may represent a real challenge in health care. Some of these patients have relatively simple defects inherently well tolerated or previously repaired. Others have fairly complex problems with survival only because of palliative and/or reparative surgery. Enormous progress has been made in the diagnosis and treatment of congenital heart disease with substantial improvements in longevity and quality of life. Indeed, the medical profession may now care for patients with fairly unique variations of anatomy and physiology plus superimposed "adult" conditions. Common examples would include pregnancy, major surgery, trauma, hypertension and atherosclerosis. Some of these combinations may not have been possible in the past - cyanotic congenital heart disease now can be successfully managed into and beyond child bearing.

Experience with combined congenital and acquired adult cardiac conditions continues to grow. There are estimated to be 600,000 American adults with various forms of congenital cardiovascular disease and an additional 25,000 infants born in the United States each year with defects of the cardiovascular system.[1] Current management of these babies means 85% can be expected to reach adulthood.[1] In 1993, there were 210 adult patients discharged from Missouri hospitals with congenital cardiovascular disease and it is very likely that this is but a fraction of the number of patients managed in ambulatory settings.[2]

Recognition of the growing frequency of this population of patients and at the same time the unique nature of their physiology led to the formation of specialized centers of care throughout the world but especially in the United States.[1] Missouri has seen the early development of four such centers:

The Adult Congenital Heart Clinic
Truman Medical Center
University of Missouri-Kansas City
2301 Holmes Street
Kansas City, MO 64108
Director: Alan D. Forker, MD
Nurse Coordinator: Mark Zimmerschied, RN
(816) 556-3053

Congenital Heart Disease Clinic for Adults
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Division of Cardiology
Columbia, MO 65212
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660 S. Euclid Avenue, Box 8086
St. Louis, MO 63110-1093
Directors: William Hopkins, MD and Daniel Kelly, MD
(314) 362-1613

The Adult Congenital Heart Disease Clinic
Department of Cardiology, St. Louis University
Cardinal Glennon Children's Hospital
1465 S. Grand Blvd.
St. Louis, MO 63104-1095
Directors: Soraya Nouri, MD and Preben Bjerregaard, MD
(314) 268-5674

Thus, adults with congenital heart disease are not rare and may be a definite challenge to primary and specialty care. Many of them need at least a periodic detailed review of their overall medical and cardiovascular status. This is especially true for patients with cyanotic or complex defects who have had major palliative or reparative surgery. An excellent review of this entire subject is the text of Perloff and Child.[3]

Richard B. Whiting, MD, FACC, FACP
Professor of Medicine
St. Louis University School of Medicine
Chairman, Dept. of Internal Medicine and Cardiology
St. Mary's Health Center, St. Louis, MO 63117
Member, International Society for Adult Congenital Cardiac Disease

References

1. Perloff JK. Congenital Heart Disease in Adults: A new cardiovascular subspecialty. *Circ* 1991;84:1881-1890.
2. Baggett M. Missouri Department of Health, Bureau of Health Resources, December, 1994.
3. Perloff JK, Child JS. *Congenital Heart Disease in Adults.* Philadelphia, W.B. Saunders Co., 1991.

Frederick Hahn Jr., MD, FACS MSMA President

Frederick W. Hahn, Jr., MD

Frederick W. Hahn, Jr., MD, an otolaryngologist from Independence, Missouri, will serve as President of the Missouri State Medical Association during 1995-1996. He was formally installed March 25 during MSMA's 137th Annual Convention in St. Louis, Missouri.

Dr. Hahn was born in Maquoketa, Iowa, in 1934. After he earned his undergraduate degree in 1956 from the University of Iowa in Iowa City, he served three years in the United States Army. He received his medical degree in 1964 from the University of Iowa and then interned at the Kansas City General Hospital.

His medical training includes one year in an internal medicine residency at the State University in Iowa City and an otolaryngology-head and neck surgery residency at the Mayo Graduate School of Medicine in Rochester, Minnesota. He became Board Certified in Otolaryngology in 1972.

Currently, Dr. Hahn is in private practice in Independence. He is past president of the staff of the three hospitals which he primarily serves: Independence Regional Health Center, Medical Center of Independence, and St. Mary's Hospital of Blue Springs. He is also on the courtesy staff of the Lee's Summit Hospital and consulting staff of the Truman Medical Center. He was on the MCI Board for 17 years.

Dr. Hahn is a Fellow of the American College of Surgeons, the American Academy of Otolaryngology and the American Academy of Facial Plastic and Reconstructive Surgery.

Long active in organized medicine, Dr. Hahn recently completed two years as the president of the Missouri Society of Otolaryngology Head and Neck Surgery. He is the past Chair of the MSMA Council. In addition to his MSMA activities, he is past president of the Kansas City Metropolitan Medical Society, on the Board of the Kansas City Society of Ophthalmology and Otolaryngology and a member of the American Medical Association.

Dr. Hahn is married to Marjorie Weldon Hahn. They have two daughters, Debra Hahn White and Kathryn Sue Hahn. During his practice years he has served three times on the board of the Independence Chamber of Commerce and once as Division Vice President. He has been active in Rotary International since 1973. He has served as president of the Independence Rotary Club and as District Governor of District 6070. Dr. Hahn is active in the Reorganized Church of Jesus Christ of Latter Day Saints serving previously as lay pastor and member of the Stake High Council. His hobbies include private piloting, skiing, and international travel.

Dr. Hahn asks for the continued support and involvement of all MSMA members. "I take sincere pride in being a member of the medical profession. My life is consumed with the effort to honor that trust and respect afforded me by my patients, my peers and my profession."

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Nona Nan Chapman
MSMA Alliance President

Nona Nan Chapman

Nona Nan Chapman of Cape Girardeau, Missouri, was installed President of the Missouri State Medical Association Alliance at the Annual Meeting in St. Louis, March 25, 1995. Nona is a certified aerobiology technician who works with her husband, Jean A. Chapman, MD, an internist and board certified allergist.

Nona's activities include singing. She majored in voice at Southeast Missouri State University at Cape Girardeau, and studied voice with Doyle Dumas, Shirley Zielinski, and Louisa Panov Takahashi. She has performed at annual meetings of the Missouri State Allergy Society, the American College of Allergy and Immunology, and at the AMA-ERF Fund-raiser during the MSMA meeting last year. She also performed at "Royal's Roast," a retirement tribute for the past MSMA executive vice president, Royal O. Cooper. Currently, she is a soprano with the First Presbyterian Church Choir and Southeast Missouri State University Choral Union.

Nona also enjoys all forms of needlework - knitting, spinning wool and needlepoint - as well as folk painting and other crafts. She owned and operated a small business, *The Needle Niche,* in downtown Cape Girardeau.

Her most recent volunteer work was with Project Charlie, a drug prevention program in the Cape Girardeau public schools. She also volunteers her time to the Cape Girardeau Area United Way and the Southeast Missouri Hospital Auxiliary.

Nona's appointments include the boards of the Friends of Cape Girardeau Public Library, the American Academy of Allergy & Immunology Auxiliary, the American College of Allergy & Immunology Auxiliary. She held the office of president of the Downtown Merchants Association, the first female president for the organization. She has been elected to the following offices: president of Chapter JN of PEO, treasurer of the Friends of Cape Girardeau Public Library, president of the Cape Girardeau County Area Medical Society Alliance, recording secretary and vice president of Chapter LY of PEO, MSMAA vice president Health Projects, MSMAA vice president Membership, MSMAA vice president Legislative Affairs, president-elect of the MSMA Alliance, secretary of the American College of Allergy & Immunology Auxiliary, president-elect and president of the American College of Allergy & Immunology Auxiliary. Nona is also a member of the Southeast Missouri Council of the Arts, a life member of the Southeast Missouri Hospital Auxiliary and Friends of St. Francis Medical Center. Nona is serving on the Foundation Board of Souteast Missouri Hospital.

The Chapmans have three daughters, a son and two grandchildren.

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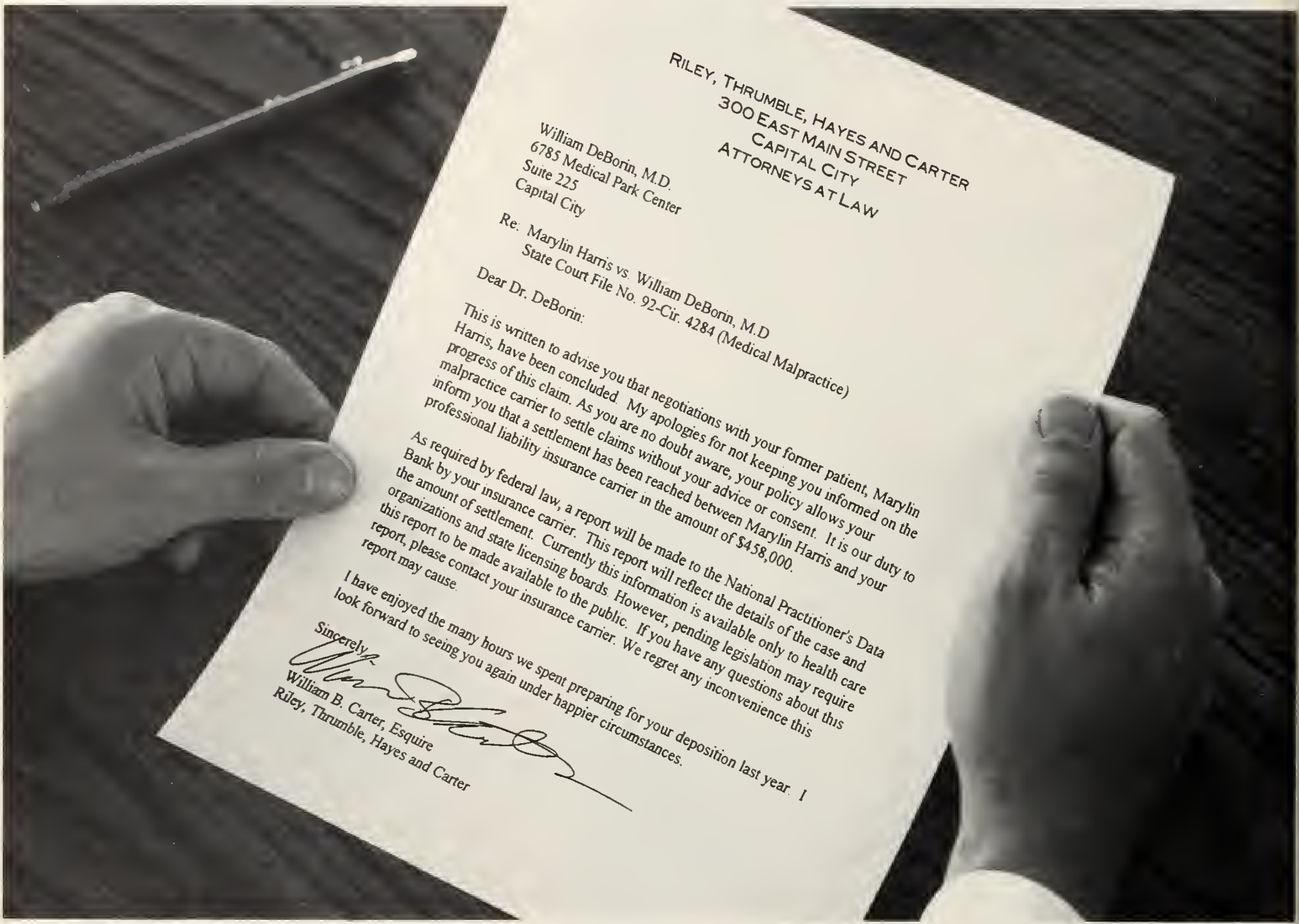

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As required by federal law, a report will be made to the National Practitioner's Data Bank by your insurance carrier. This report will reflect the details of the case and the amount of settlement. Currently this information is available only to health care organizations and state licensing boards. However, pending legislation may require this report to be made available to the public. If you have any questions about this report, please contact your insurance carrier. We regret any inconvenience this report may cause.

I have enjoyed the many hours we spent preparing for your deposition last year. I look forward to seeing you again under happier circumstances.

Sincerely,

William B. Carter, Esquire
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Otolaryngology Quiz #3

by Gregory Renner, MD & Robert P. Zitsch III, MD
Division of Otolaryngology, University of Missouri - Columbia

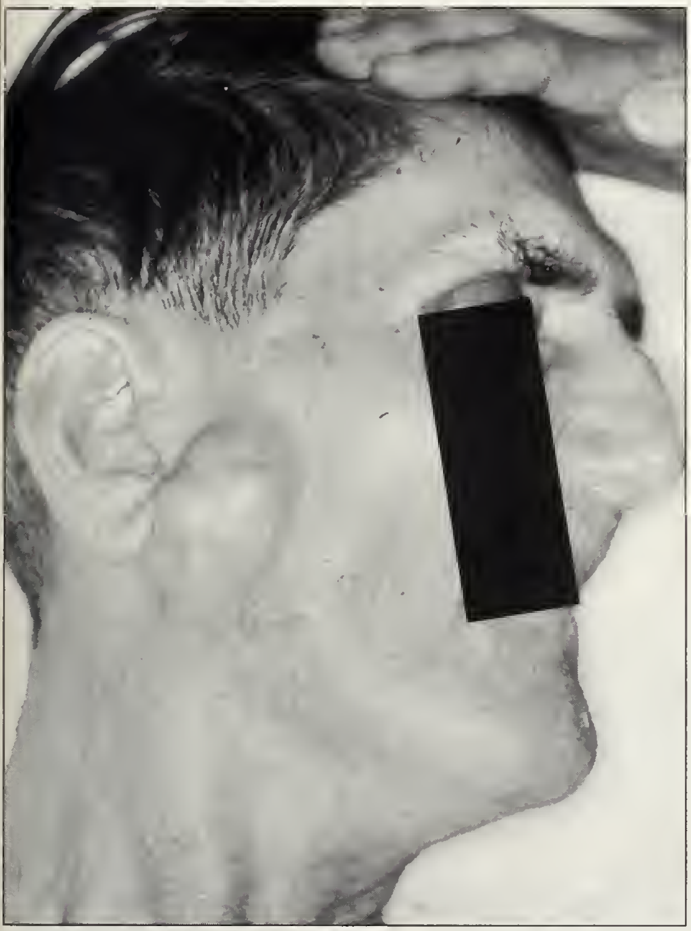

Figure 1

This 47-year-old farmer has a slowly growing, but otherwise asymptomatic lump just anterior to his right ear of four years duration. Physical examination reveals a firm, nontender mass, but otherwise is completely normal. There is no weakness of the facial muscles. He had been treated with broad spectrum antibiotics for two weeks which did not affect the mass. This mass is most likely to be:

a. Lymphadenitis caused by tuberculosis.
b. Branchial cleft cyst.
c. Benign tumor of the parotid gland.
d. Malignant tumor of the parotid gland.
e. Metastasis to parotid lymph nodes.

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER:
c. Benign tumor of the parotid gland.

Masses in the region of the parotid gland present a bewildering array of possibilities; however, the vast majority of cases are clustered in a few benign disorders. Malignant tumors do occur, even in children.

The classic and still valid approach for a parotid mass is to remove the gland lateral to the facial nerve which establishes the diagnosis and is curative for most benign tumors and low grade malignant tumors.

Aggressive tumors require more extensive surgery and radiotherapy in some instances. Benign tumors frequently grow large and unsightly and may be removed for this reason.

Ironically, a long duration does not guarantee that the mass is benign because highly aggressive malignant tumors occasionally arise in benign tumors. Pain, fixation of the mass to deeper tissues, and invasion of the facial nerve suggest malignancy.

Fine needle aspiration biopsy is frequently diagnostic and generally differentiates between neoplastic and inflammatory processes even when it does not provide a definitive diagnosis. Imaging techniques do not generally help much with the diagnosis or management of parotid tumors.

TABLE I. COMMON PAROTID MASSES

I. Benign Parotid Tumors
  - **A. Pleomorphic Adenoma (Benign mixed).**
    Almost 50% of all parotid tumors.
  - **B. Warthin's tumor.**
    Occurs mostly in men older than 40 years of age
  - **C. Hemangioma.**
    Most common tumor in children, rare in adults.
  - **D. Miscellaneous - numerous types of adenomas.**

II. Malignant Tumors
  - **A. Low Grade**
    - **1. Muceopidermoid carcinoma, low grade**
    - **2. Acinous cell carcinoma**
  - **B. High Grade**
    - **1. Malignant mixed tumor**
    - **2. Mucoepidermoid carcinoma, high grade**
    - **3. Adenoid cystic carcinoma**

III. Enlarged lymph nodes - from conjuctivitis, cat scratch, TB, etc.

IV. Miscellaneous - Sjogren's disease, lymphoma, etc.

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Membership Notes

Lenworth Johnson, MD, an associate professor of ophthalmology and neurology at the University of Missouri Columbia, led MU's clinical trial on nonarteritic ischemic optic neuropathy (NAION). The multi-center study funded by the National Eye Institute examined the use of optic nerve decompression surgery to treat NAION. Research was halted when evidence of the surgery's potential damage became clear. A study published by Dr. Johnson in 1994 identified NAION as the leading nerve-related cause of sudden vision loss in people over 50. Researchers in the trail found that more than 40% of those who received no treatment had substantial improvement in their eyesight within six months. Twelve percent of eyes in careful follow-up lost three or more lines of vision at six months, compared to 24% in the surgical group, suggesting that decompression surgery may be harmful. No beneficial surgical effect on visual acuity was seen in patients with progressive visual loss.

Horace E. Thomas, MD, of Columbia, is the 1995 recipient of the MSMA Citizenship and Community Service Award. It is a peer recognition award for the extraordinary gift to reach beyond the scope of medicine.

Dr. Thomas began practice in Columbia in 1947. He has been on staff at Boone County Hospital, Columbia Regional Hospital, Ellis Fischell State Cancer Hospital and at Keller Hospital in Fayette. He was a Clinical Associate Professor of Surgery at UMC's Medical School, the surgeon for UMC's Student Health Services and the surgeon for Stephens College's Student Health Service.

Dr. Thomas became a diplomate of the American Board of Surgery in 1947 and the American College of Surgeons in 1948. He retired from practice in 1985.

When he retired, Dr. Thomas exchanged his scalpel and sutures for hammer and nails and works tirelessly for the Habitat for Humanity organization. The program builds new homes for families who could not otherwise afford to own a home. He also volunteers for the Columbia Art League and serves on the Board of Directors for the UMC Medical School Foundation, a position he has held for over 40 years.

In 1988, he donated $10,000 dollars to the UMC School of Medicine with the stipulation that it would be renewed annually if it was used for a medical ethics program. The program now flourishes because of his generosity.

Missouri State Medical Association members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

NEW MEMBERS

MSMA

Douglas R. Berson, MD - AI
222 S. Woodsmill Rd. #410 N.
Chesterfield MO 63017
Med. Col of PA Philadelphia PA; 1983

Richard A. Bligh, MD - IM
822 Woods Dale Ct., Ballwin, MO 63011
UNIV C.E.T.E.C. Santo Domingo, Dominican Republic; 1982

Wesley H. Chou, MD - N
10418 Goddard Apt 228, Overland Park, KS 66214
Natl Taiwan University; 1978

Enes M. Kanlic, MD - GS
13058 Ferntrails Lane, Creve Coeur, MO 63141
Med. Sch of Belgrade Yugoslavia; 1977

Jaime V. Miravite, MD - FP
16513 Lacross Ln. Chesterfield, MO 63005
Angeles Univ Fndn College of Medicine, Pampanga Philippines; 1988

Sunita Mutha, MD - IM
660 S. Euclid Ave., Campus Box 8005
St. Louis, MO 63110
Albany Medical Coll Albany NY; 1988

Mark A. Varvares, MD - OTO
3635 Vista Ave. Grand Blvd.
St. Louis, MO 63110
St. Louis University; 1986

PERRY-STE. GENEVIEVE

David E. Melchior, DO - FP
212 Hospital Lane Ste 101, Perryville, MO 63775
University of Osteopathic Medince Health Sciences, Des Moines, IA; 1988

STUDENT

University of Missouri- Kansas City
Daniel P. McBride

Membership Notes

IN MEMORIAM

Clarence C. Cohrs, MD, 82, of Moberly, Missouri, died December 19, 1994, after a lengthy illness. Dr. Cohrs received his medical degree at the University of Illinois, Chicago, in 1937. After marrying Ramona L. Paulsen, RN, he opened his first medical practice in Harvey, Illinois in 1940.

In 1941 he was called to active duty in the U.S. Army. He served as Lieutenant Colonel in the U.S. Army Medical Corps in Europe during World War II, where he was a regimental surgeon with the 347th Engineer Regiment. The Regiment arrived in Normandy three weeks after the Allied invasion and followed General Patton's army through Luxembourg, France and Germany. His last service in Europe was at the 30th General Hospital in Belgium in 1946.

Dr. Cohrs returned to his practice in Illinois briefly before coming to Moberly, Missouri in 1948 to join the Woodland Hospital and Clinic where he practiced for 39 years. Although Dr. Cohrs' specialty was internal medicine he became well-known throughout the area for his expertise in allergy and immunology. He earned a certificate of merit from the American Board of Allergy and Immunology, the American Board of Internal Medicine, and the American Board of Pediatrics. He was a member of the Pan American Allergy Society, the Society for Clinical Ecology and the International Allergology Society. He was a Fellow of the American College of Allergists, the American Association of Clinical Immunology and Allergy, and the American Academy of Family Physicians.

Dr. Cohrs was recognized by the Missouri State Medical Association in 1987 for 50 years of dedicated service to the medical profession. He was a past president of the Pan-American Allergy Association, the Missouri State Allergy Association and the Chariton-Macon-Monroe-Randolph County Medical Society.

James M. Macnish, MD, 89, of Webster Groves, Missouri, died February 26, 1995. Dr. Macnish received his medical degree at Washington University in 1929. He served in the Naval Reserves in the South Pacific during World War II. Dr. Macnish, a urologist, practiced medicine in the St. Louis area from 1934 until he retired in the mid-1970s. He was on staff for many years at Jewish Hospital. Dr. Macnish was a past president and vice president of the St. Louis Metropolitan Medical Society and a past president of both the St. Louis Urological Society and the St. Louis Surgical Society. He was a co-founder of Group Hospital Service, now St. Louis Blue Cross. He was a member of the American Urological Association.

AMA PHYSICIAN'S RECOGNITION AWARDS

The following physicians have completed 150 hours of continuing medical education within a three-year period. Sixty of the credit hours are earned in Category I programs.

I. Renee Albert - *Overland*
Dee C. Anderson - *St. Louis*
Nicholas Bartulica - *St. Joseph*
Thomas A. Beller - *Kansas City*
Stephen F. Bowen - *St. Louis*
James S. Bower - *Kansas City*
John H. Brabson - *Springfield*
Charles J. Brook - *Kansas City*
Curtis S. Cox - *Jefferson City*
Richard Cronemeyer - *Lee's Summit*
Jonathon Foley - *Cape Girardeau*
Edward A. Glenn - *Louisiana*
Garth F. Harrison - *Kansas City*
Richard Heimburger - *Osage Beach*
Patricia E. Hogan - *St. Joseph*
Paul S. Jones - *Joplin*
George R. Kletzker - *St. Louis*
Benjamin Lampert - *Springfield*
Herluf G. Lund - *Chesterfield*
Francis M. Maple - *Springfield*
Patricia A. McGuire - *St. Louis*
David L. McMillan - *Neosho*
Scott W. McMurray - *Springfield*
Robert F. Owen - *St. Louis*
N. Bruce Pitsinger - *Chesterfield*
Jo-Ellyn M. Ryall - *St. Louis*
John J. Seaberg, III - *Columbia*
Peter G. Smith - *St. Louis*
William A. Turner - *Nevada*
Jack R. Uhrig - *Marshall*
Bruce J. Walz - *St. Louis*
Michael J. Waxman - *Kansas City*
Carroll R. Wetzel - *Clinton*
Richard B. Whiting - *St. Louis*

50-Year Physicians Honored

The following physicians were honored at the Presidential Installation ceremony during the 137th Annual Meeting of the Missouri State Medical Association, March 25, in St. Louis, for 50 years of dedication to the practice of medicine.

George H. Ahlering, MD - *St. Louis*
William G. Arney, MD - *St. Louis*
G. Comer Bates, MD - *Kansas City*
Thomas H. Boldt, MD - *Bridgeton*
Hugh S. Brady, MD - *Concordia*
Shael S. Bronson, MD - *St. Louis*
Donald O. Burst, MD - St. Louis
Donald W. Bussmann, MD - *Chesterfield*
Nelson S. Butterworth, MD - *Kansas City*
George T. Carpenter, MD - *St. Joseph*
Sanford F. Cockerell, MD - *Independence*
Mary C. Colglazier, MD - *Lee's Summit*
Marshall B. Conrad, MD - *St. Louis*
Oral B. Crawford, MD - *Springfield*
Paul A. Dewald, MD - *St. Louis*
Erin A. Dillard, MD - *Springfield*
Dallas J. Dyer, MD - *St. Louis*
Vincent L. Eberle, MD - *St. Louis*
David M. Gibson, MD - *Santa Fe, NM*
Lawrence E. Giffen, DO - *Jefferson City*
Don F. Gose, MD - *Springfield*
Samuel B. Guze, MD - *St. Louis*
Robert W. Hamill, MD - *Gulfport, FL*
L. Wayne Hart, MD - *Shawnee Mission, KS*
Charles C. Jacobs, MD - *Grover*
James S. Johnson, MD - *Kansas City*
John T. Johnstone, MD - *St. Louis*
Raymond J. LaDriere, MD - *St. Louis*
Clark H. Lentz, MD - *Shawnee Mission, KS*
Charles A. Molden, MD - *Bridgeton*
De Armond Moore, MD - *Springfield*
Richard I.C. Muckerman, MD - *St. Louis*
Wilbur A. Mullarky, MD - *Oviedo, FL*
William L. Mundy, MD - *Merriam, KS*
Helen E. Nash, MD - *St. Louis*
Frank J. Niesen, MD - *St. Louis*
John J. O'Hearne, MD - *Kansas City*
William H. Penninger, MD - *Springfield*
Caryl A. Potter, MD - *St. Joseph*
Richard G. Pugh, MD - *Blue Springs*
John P. Roberts, MD - *St. Louis*
Gordon C. Sauer, MD - *Kansas City*
Jerome T. Shen, MD - *St. Louis*
Sanford Simon, MD - *Kansas City*
Edwin L. Slentz, MD - Shawnee Mission, KS
Benj F. Smith, MD - *St. Louis*
Wallace R. Stacey, MD - *Independence*
Hugh E. Stephenson, MD - *Columbia*
Malcolm H. Stroud, MD - *Dallas, TX*
Hugh R. Waters, MD - *Chesterfield*
Warren F. Wilhelm, MD - *Lake Ozark*
Starks J. Williams, MD - *Kansas City*

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Sidney A. Dulle, C.P.A. and Larry L. Harris, C.P.A.

...not just on April 15th, but throughout the year. Each working day of your life, government is there to take its share. How well positioned are you to greet this guest? Much depends on your tax status. You may be a partner in a health care practice, a sole practitioner, an independent contractor with one or more established delivery systems or corporate entities. Still more likely in this fast changing world of physician involvements, is the status of employee. The chances are you have been, or will be, approached by a host of healthcare systems offering an attractive bundle of goodies if only you would become an employee. The pros and cons of an employment arrangement involve questions of financial advantage, insurance protection, competitive position, quality of service, availability of technology and, neither last nor least, the burden of insurance and government paperwork lifted from your shoulders. Making the right choice involves careful consideration of the tax consequences of your decision.

Federal tax rates for individuals during 1995 can be as high as 39.6%. The State of Missouri has generously agreed not to extract more than 6% of your earnings. If you don't pay attention to tax planning it's going to cost you: perhaps as much as 45.6% of your earnings. Since, however, you feel you work very hard - perhaps long or inconvenient hours - and you are held responsible for the health, if not the very life of your patients, you may feel you deserve the money more than Uncle Sam. Your flexibility in reducing taxes is firmly grounded in the tax status under which you choose to operate. So let's look at advantages as well as disadvantages in becoming an employee versus a partner or sole proprietor. The price paid or advantage gained will depend upon the degree to which each of the factors bears on your personal circumstances.

Social Security Payments

Social Security payments...this is where the employee has the advantage over the self-employed. During 1995, an employee physician earning $150,000 will pay $5,969 less in Social security including both OASDI (Old-age, survivors, and disability insurance) and hospital insurance (medicare) than a self-employed physician with the same $150,000 income. Self-employed individuals pay twice as much as employees.

Profession-related expenses

Profession-related expenses...here the advantage is with the self-employed. From the first dollar spent for professional insurance, periodicals, journals, business use of automobile, and all other expenses incurred in the "ordinary and necessary" course of business, to the last dollar, they are all deductible from otherwise taxable income.

For the employee, such expenses are generally deductible only under the category of Other Miscellaneous Itemized Deductions and, as such, are only deductible to the extent they exceed 2% of your Adjusted Gross Income. For the $150,000 salaried employee physician, this means at least the first $3,000, and possibly several thousand dollars more, of such expenses may not be deductible.

Retirement plans

Retirement plans...are generally more favorable to the self-employed, but often depend on the degree to which the employer has provided for retirement of all employees. Since this is a major area of tax savings, as well as basic remuneration, counsel should be sought to compare your current situation to that which would replace your program.

Self-employed individuals are generally able to set aside a larger part of their current salary for retirement than an employee. Limitations on types of retirement plans that can be offered, as well as the amount of contribution by an employer, also vary as to whether the employer is a corporation, a partnership, or a non-profit organization (variances are even found based on the type of non-profit).

These tax considerations need to be weighed against the many advantages of employee status: generally less hours, paid vacation and CME time, less call coverage, less management responsibilities, and others. If you are currently an employed physician, you may wish to consider having your tax planner look at alternatives available under your current employment contract. If you are approached to become an employed physician, careful planning before you sign a contract will prepare you for that time when Eugene O'Neil may have warned ...*THE TAX MAN COMETH.*

The Authors

Sidney A. Dulle, C.P.A. and Larry L. Harris, C.P.A. are both with the Jefferson City firm of Dulle and Associates, P.C., Certified Public Accountants.

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Continued on page 178

***This Information is published in the *Tax Supplement 1995*, Internal Revenue Service Publication 1049B**

Continued from page 177

Tax Changes in 1994

People should be aware of some of the tax changes for 1994 that could make a difference on the bottom line of their tax return.

The standard mileage rate for the cost using one's car for business miles is up a penny to 29 cents per mile. And for business travel away from home, people can't deduct the travel expenses paid for someone accompanying them, such as a spouse, unless that person is an employee, has a specific business purpose for the travel, and would otherwise be allowed to deduct the travel expense.

For those who work and have qualifying children, the earned income tax credit amount will increase. The amount a person can earn and still be eligible for the credit will increase too. No longer available will be the health insurance credit and the extra credit for a child born during the year.

The earned income tax credit expands to include people who work but don't have any qualifying children. They can file for the credit using Form 1040EZ. However, people with qualifying children must use either Form 1040 or 1040A

Also in 1994, Social Security and equivalent tier 1 railroad retirement benefits may be taxed at a higher rate. Some people may continue to include up to 50 percent of their benefits in taxable income, while others may have to include up to 85 percent. Whether the new 85-percent rate applies depends on a person's income.

Beginning in 1994, people who make a charitable contribution of $250 or more must get written documentation from the charity before they can deduct it.

A contribution over $75 given to a charity that is partly for gifts or services also requires written documentation. The charity must give an estimate of the value of the gifts for services and state that a deduction is allowed only for the amount over that value. For example, people who contribute $85 to go to a charity dinner valued at $25 can deduct $60 as a charitable contribution, as long as they get it in writing. This documentation does not need to be sent with the tax return. It is your receipt that you need to keep with your records in case the IRS asks about your donation.

Some work-related moving expenses are no longer deductible. They include meals while moving from the old to new home; travel expenses, meals and lodging for pre-move househunting trips; meals and lodging while staying in temporary quarters near the new job; and qualified home sale, purchase and lease expenses.

Also, to deduct allowable moving expenses, the new main job location must be at least 50 miles farther from the former home than the old main job location. This changed from 35 miles.

Moving expenses will no longer be an itemized deduction. People will be able to deduct these expenses in figuring their adjusted gross income. And they can only deduct the expenses that are not reimbursed by their employer. Employer reimbursements are not included in income.

Starting in 1994, people can deduct only 50 percent of the cost of business meals and entertainment expenses. And there is no longer a deduction for dues and fees for membership in clubs; although people can still deduct specific business expenses, such as meals, that are spent at a club if the expenses meet certain requirements.

Luxury taxes on aircraft, boats, furs and jewelry were repealed. However, for 1994, the luxury tax does apply to passenger vehicles with a sales price over $32,000. The tax does not apply to parts and accessories installed to help a person with a disability operate, enter or exit the vehicle.

For more information on tax changes call 1-800-829-3676 and get free *Publication 553, Highlights of 1994 Tax Changes*.

Electronic Filing

Electronic filing has many advantages. It produces refunds in three weeks. It has three separate checks for accuracy before processing which offer 99.5% error-free filing. If there are problems with the return as filed, people are notified of within 48 hours so they can correct them before they become troublesome and expensive.

People who owe tax can file as early as they like and pay what's owed by April 15. They have the advantage of getting written acknowledgment that their return is accepted for processing. No other way of filing offers this written notice of receipt. The IRS sends reminders to those who "file now, pay later."

Tax professionals nationwide offer electronic filing. Some even transmit returns people prepare themselves.

People with home computers can prepare their own returns using tax preparation software sold in computer stores. Many software programs come with a 1040PC format that prints out an answer sheet of the return to mail to the IRS. Unlike traditional forms that may have many blank lines, the 1040PC program prints only the lines that have entries. The result is a three column list that fits on one or two pages.

Telefile lets some people with simple tax returns file by phone. They call a toll-free number using a touch-tone phone and enter total wages, interest and tax withheld. IRS computers figure the adjusted gross income, the tax and any refund or tax owed while the person is on the phone. It is still being tested in certain states.

Special IRS Office Helps Resolve Problems

The Problem Resolution Office (PRO) can cut through red tape to help resolve problems that haven't been settled through normal channels. Call 1-800-829-1040 and ask for PRO.

File for an Extension

People who can't meet the filing deadline can fill out Form 4868 and get an automatic extension of time to file. They should send the estimated tax they owe, but the IRS will accept the form even if they can't pay yet. The penalty for not filing, or filing late, is higher than the penalty for paying late. The IRS charges interest on any taxes paid after the due date.

Keeping Tax Records

Want to make preparing your federal income tax return easier next year? Start with a copy of this year's return. Add to that any canceled checks, receipts and records you get through the year and that will help when you file your next tax return. By keeping your income and expense records in good order, you can save hours of searching at the end of the year.

You can get a copy of your prior year tax returns by filling out Form 4506. There is a $14 fee for each return, and it takes up to 60 days to get your copy. Or you can get a free transcript of your tax account information that includes your tax, income, number of exemptions and more. Allow about two weeks to get it. Call 1-800-829-1040.

Free Small Business Newsletter

The IRS offers a free small business newsletter called *Tax Tips* that is especially for the new business owner. Written in layperson's language, each issue covers business tax laws, helpful bookkeeping and recordkeeping hints, explanations of how the IRS works and where to go for additional help. The 12-month subscription is free, call 1-800-829-1040 and ask for the taxpayer education coordinator.

Ordinary People or Household Employers

Hiring household workers can turn ordinary people into employers, and they may not even know it.

When people hire baby-sitters, cooks, maids, or gardeners to work at their homes; when they tell the workers what, when, where and how to do the job; when they give workers the tools they need, and can fire them, too; they become household employers.

These employers have tax responsibilities that other people do not. They first must have an employer identification number (EIN), which can be applied for either by mail or by telephone. Then they must keep a record of the name and Social Security number of each employee for tax purposes.

Household employers must withhold Social Security and Medicare Tax (FICA) from employee wages, as well as pay an equal amount from their own funds. They also must withhold federal income tax if the employee asks for it and they agree.

Depending on the amount of wages paid to employees, household employers may have to pay Federal Unemployment Tax (FUTA), or advance payment of the earned income tax credit if the employee qualifies for it.

None of the taxes apply, however, if the worker is hired through an agency that is responsible for who does the work and how it is done. For example, a nurse is hired from a home health care agency to tend to an elderly parent. The agency sets and collects the wages, pays the nurse and requires regular reports from the nurse.

But if the agency only gives out a list of nurses, is not responsible for how the work is done and does not collect the wages, then chances are the nurse is a household employee. In that case, the taxes apply.

Continued on page 180

Continued from page 179

An employer also has to file certain forms with the IRS. These forms are to report the amount of tax withheld from employee's wages and are filed either quarterly or at the end of the year, depending on the amount of wages paid and the type of tax.

For specific information on this topic and on getting an EIN, call 1-800-829-3676 and ask for free *Publication 926, Employment Taxes for Household Employers.*

Employee and Independent Contractor: Know the Difference

At some point, many business owners will hire someone to do work for them. They may get an accountant, builder, lawyer or other professional.

No matter who is hired, the last thing the owner may think might be, "is this person an employee or independent contractor?" Knowing the difference is important for tax purposes.

Business owners must withhold income tax on employee's wages, and must pay Social Security tax (FICA) as well as withhold the employees' portion of FICA. They also are responsible for unemployment tax (FUTA)

So how do they know the difference? It comes down to the right to control. An employee is controlled by an employer in ways an independent contractor is not.

According to the IRS, if you have workers and you set their hours, provide their tools, tell them what to do and how to do it, and can fire them, then chances are they're employees, not independent contractors.

Business contracts set up calling employees "independent contractors" won't wash with the IRS. If they meet the employee criteria they are considered employees.

As for the lawyer, accountant or other professional mentioned earlier, if they operate their own business and provide special services to the public, they are most likely independent contractors. They can set their own hours and methods for doing the job, and they don't report on a regular basis.

Improperly classified employees can cause business owners to end up with substantial penalties for nonpayment of employment taxes. Owners who need help deciding how to classify someone can fill out Form SS-8, "Determination of Employee Work Status for Purposes of Federal Employment Taxes and Income Tax Withholding." The IRS will tell them if their workers are employees.

Employers deposit the income, FICA and FUTA taxes at qualified financial institutions on a specific schedule. If these taxes are not withheld or deposited on behalf of employees, the IRS may hold the business owner liable for a penalty equal to 100% of the tax not paid, plus interest.

Business owners must give a Form W-2, "Wage and Tax Statement," to employees showing the amount of their wages and taxes withheld. The owner must file Form 941, "Employer's Quarterly Federal Tax Return." If these forms aren't filed, the owner will be subject to penalties.

Payments to an independent contractor that total $600 or more for the year must be reported by the business owner on Form 1099-MISC, "Miscellaneous Income." If the form isn't filed with the IRS, the owner will be subject to penalties. A copy must also be given to the independent contractor.

Knowing the difference between employees and independent contractors is one step to making sure a business runs smoothly.

For more information on this topic, or to get Form SS-8, call 1-800-829-3676 and ask for these free publications:

Publication 15, Employer's Tax Guide (Circular E)
Publication 505, Tax Withholding and Estimated Tax
Publication 937, Employment Taxes.

Who Should Estimate Taxes

Some people who owe tax in 1994 may have to pay estimated tax in 1995.

Employers usually withhold federal income tax from wages. But people who don't have enough tax withheld or whose income is not subject to withholding, may need to make quarterly payments to the IRS in addition to filing their regular federal income tax return once a year. Income not subject to withholding may include self-employment and investment income, unemployment compensation, interest, rent, gains from the sale of assets, prizes and some gambling winnings.

In general, people should make estimated tax payments for 1995 if the amount of tax they will owe is $500 or more (after subtracting withholding and credits) and:

- Less then 90% of their total tax owed for 1995 will be covered by withholding and tax credits, or
- less than 100% of the amount

of their 1994 taxes will be covered by withholding and tax credits.

Figure the tax owed by estimating the adjusted gross income, taxable income, and taxes and credits for the year. Form 1040-ES and its worksheet will help, along with last year's tax return. Then figure the amount that will be covered by withholding and credits. Make quarterly estimated tax payments on the amount not covered by withholding and credits.

Keep in mind that any change in a person's tax situation, like marriage, divorce, birth of a child, or purchase of a home, can make a difference when figuring taxes. If that happens consider checking whether estimated tax payments or withholding should be changed.

More information about estimated tax is available in free *Publication 505, Tax Withholding and Estimated Tax.*, Call 1-800-829-3676 to order it and Form 1040-ES.

Turn Losses Into Gains

People who lose personal or business property due to storms, fires, thefts, disasters or certain other events may be able to recoup some of their losses through federal income tax breaks.

This type of loss is called a casualty. For tax purposes, a casualty is the damage, destruction, or loss of property due to an identifiable event that is sudden, unexpected or unusual in nature. The IRS says at least a portion of the casualty losses to property such as a house or car may qualify as an itemized tax deduction.

To figure the loss in most cases, the taxpayer should make a list of the property both before and after the casualty. The difference between the two values is usually the loss amount. For nonbusiness losses, this amount is reduced by any insurance or other reimbursement, then by $100, and finally by 10% of the taxpayer's adjusted gross income.

If a loss occurs in a presidentially declared disaster area, taxpayers have a choice of when to deduct the loss. Generally, they can amend last year's return to get a refund right away. Or they can wait until they file their return for the year the loss occurred.

New rules apply to insurance payments for property lost in disaster areas declared after August 31, 1991. This means some taxpayers may be able to file amended returns to get refunds.

Disaster victims may now keep any insurance money they get for personal property in a principal residence that was not covered property for insurance purposes. And they now have four years, not two, from the end of the tax year that they get the money to replace or repair the property.

More info on casualty and disaster losses is in *Publication 547, Nonbusiness Disasters, Casualties, and Thefts*, and *Publication 334, Tax Guide for Small Business.*

Get Tax Savings Now on Retirement Income

Individual Retirement Arrangements (IRAs) are still a great way to lower taxes now and save for the future. They are personal savings plans that offer a tax advantage to people who set aside money for retirement

That means people may be able to deduct all or part of their contributions to an IRA. And the amounts in the IRA, including earnings and gains, are not taxed until they are distributed.

People with taxable compensation, like wages, commissions, taxable alimony and tips, who are younger than age 70 1/2 at the end of the year can contribute to an IRA. They may also be able to contribute to an IRA from a spouse who doesn't work.

Contributions must be in the form of money, such as cash, check or money order, property doesn't count. The most that can be contributed for any year is $2,000 or taxable compensation, whichever is smaller. People can put money into an IRA at any time during the year or by the due date of their tax return for that year, not including extensions.

People now have a myriad of choices on how to invest in an IRA But all IRA plans must meet Internal Revenue Code requirements. Different IRAs can be set up with a variety of organizations at any time during the year. They can be set up at a bank or other financial institution or with a mutual fund or life insurance company. They can also be set up through a stockbroker.

Publication 590, Individual Retirement Arrangements, gives more information on IRAs, including how to report contributions, when to start withdrawing money and what actions will result in penalties. Order it free by calling 1-800-892-3676. **MoMed**

Mutual fund investing: Keeping track may keep taxes down

Matthew Taheri, Investment Advisor

More physicians than ever own shares in mutual funds. Some anticipate that the growth of the mutual fund industry will continue for many years, particularly with some "baby boomers" having more discretionary income and looking toward saving for retirement. But there's more to getting high returns on your investments than just selecting a good mutual fund. Keeping good records is extremely important as well.

Without good records to substantiate your investment, you may lose a greater percentage of your dividends and capital gains to the IRS than necessary.

Making money in mutual funds

Generally, mutual funds offer investors three ways to potentially make money. One way is through dividends, which are considered *ordinary income* to the investor. Income funds typically pay dividends monthly; growth funds, semiannually or annually.

Another potential moneymaking opportunity in mutual funds comes when a mutual fund buys and sells securities for a profit. These shares earn *capital gains*, which are distributed to shareholders, generally once a year. On these gains, you usually pay either ordinary income tax or a capital gains tax, whichever is less.

The third way you may make money in a mutual fund is from buying and selling fund shares on your own, at a profit.

Keeping records

When dividends and capital gains are declared, shareholders may take the money in cash, or reinvest it in more fund shares. The required record keeping is tedious but important, because it affects your *cost basis* in the fund.

To help in your record keeping, your mutual fund will provide a statement each time (or at least quarterly) a transaction occurs in the account. While you should always keep the most recent statement, you should also keep the year-end statement which reflects all of the activity during the year.

Reporting fund earnings

In January of each year, you should receive a 1099 Form from the mutual fund reflecting the dividends and capital gains declared by the fund. The IRS also gets a copy of the information and matches it to what is on your tax return.

Dividend income, which is a distribution of corporate profits to shareholders, is reported on Schedule B of your tax return. Although a mutual fund might also earn interest, it is generally reported in the form of dividend income. Since both interest and dividends are treated as ordinary income, it really doesn't make any difference how they're reported. But you must pay taxes on that income now, even if you reinvest your dividends and purchase more shares.

A *capital gains distribution* is your share of the profits from the trading activity in the fund. Regardless of the type of fund, any trading profits are considered taxable capital gains and must be reported on Schedule D.

Undistributed capital gains

On occasion, the mutual fund may have undistributed capital gains, or gains it retains and on which it pays taxes. The bad news is that you must still report them on your tax returns as income, even though they're not distributed. However, the good news is you'll get a tax credit for the tax paid by the mutual fund.

If the only capital gain you receive is one declared by your mutual fund, all you have to do is report it on the front page of your 1040 Form. But only do this if your tax bracket is less than or equal to the maximum capital gains rate.

If you invest in a foreign securities fund, your 1099 Form may show an amount for foreign taxes which were paid by the mutual fund. Check with your tax advisor whether you may include that amount on your itemized deductions or claim a foreign tax credit.

How to figure gains and losses

Now comes the fun part. Let's suppose that you sold some of your mutual fund shares during the year. This is also reported by the mutual fund on a 1099 Form. Unfortunately, this form only shows the value of the investment when you sold it. It doesn't show your cost basis.

If you sold all of your shares, the calculation is relatively straightforward. On Schedule D, you'll put in how much you paid for the shares and the date that you acquired them. If you purchased the shares on numerous occasions, you can simply write in "various." Then put in the amount that you received when you sold the fund shares. Any shares held more than one year are "long term," while shares held less than one year are "short term."

How do you know how much you paid for the shares, particularly if you were reinvesting dividends and capital gains? Keep good records. Go back and add up all the money you paid for the shares, plus the dividends and capital gains on which you paid taxes over the years. Since you paid taxes on the reinvested money, it's added to your cost basis.

Mutual funds will often provide some of this information. But if you've owned the shares for a long time, they may not have retained all of the information. Therefore, you'll have to order past annual statements, for which you may be charged a fee.

Calculating your cost basis

If you're redeeming only a partial amount of your mutual fund, the calculation may get more complicated. Generally, you must select one of three methods to determine your cost basis.

The first method is *specific identification*, which generally offers the most flexibility but also requires the most paperwork. Before you redeem shares, you must specify in writing to the mutual fund which shares you want to sell.

How do you identify them? You must send a letter to the mutual fund company in which you write: "I want to sell the shares I purchased on a specific date at a specific price." It's important to receive written confirmation from the mutual fund. If you don't follow this procedure, you could be required to use one of the other methods.

By identifying specific shares, you may maximize your tax planning. If you have capital losses from other investments, you may want to sell shares for the largest gain. On the other hand, if you're trying to minimize additional taxable income for the year, you may want to identify shares with the highest cost to reduce your capital gain or even produce a loss.

The least-used method, *first-in/first-out*, is the one the IRS wants you to use. It generally produces the highest capital gain, because the shares you purchased at the beginning are usually the least expensive. If you fail to indicate another method, the IRS will assume that you sold the shares you acquired first.

The most commonly used method is the *average basis* method. You add up your investment (the amount of money you invested directly, plus the dividends and capital gains you reinvested) to determine your total cost. Then, divide your total cost by the number of shares outstanding to reveal your average cost basis. When you sell shares, you subtract the sales price from your average cost basis to determine your capital gain or loss. When using the average basis method, indicate it on Schedule D.

One caveat: Once you use the averaging method for a mutual fund, you must use the same methodology for that fund and any funds within the same fund family **forever** unless you get IRS approval to do otherwise. On the other hand, if you use specific identification, or first-in/first-out, you can later switch to average share.

It's not what you earn that matters but what you **keep after taxes** are paid that's important. Much of what you keep is hard to control because Uncle Sam sets the tax rate. However, keeping good records and using the correct methodology could significantly impact your taxes in a positive way. **MoMed**

The Author

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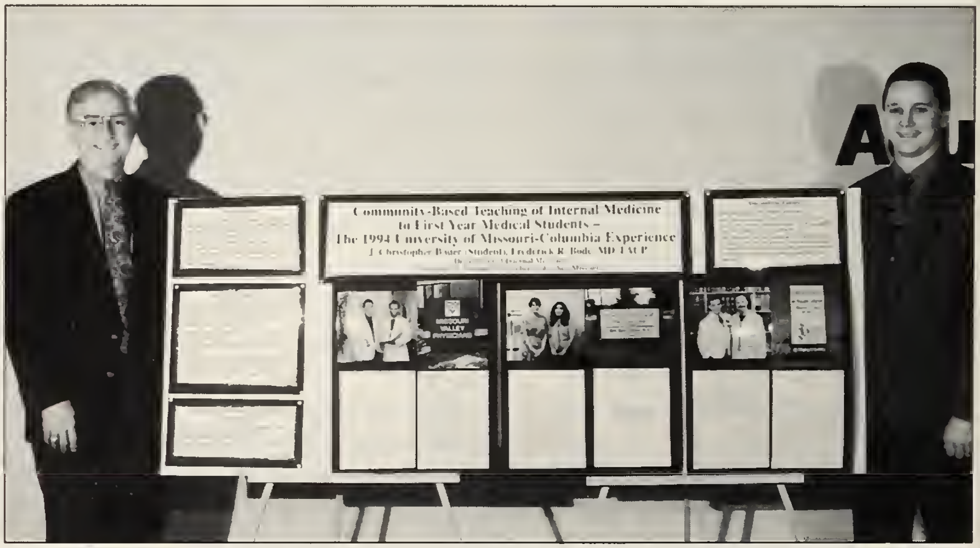
Community-Based Teaching of General Internal Medicine to First Year Medical Students

J. Christopher Bauer, M-2, University of Missouri-Columbia

The recent emphasis on primary care medicine has made obvious the need for more student-physician interaction outside the traditional primary care setting. This is especially true for internal medicine. The majority of student's experiences in internal medicine are in treating the critically ill and those with complex medical problems typically seen in teaching hospitals. This leaves students with the idea that internal medicine is a discipline composed of subspecialists called in to deal with patients only when a specific organ system is failing. Furthermore, students are usually not given the opportunity to observe the role a general internist plays in delivering a wide range of primary care services to the adult population. As a result, students pursuing a career in primary care may not consider internal medicine.

I matriculated into medical school with the goal of becoming a primary care physician in a small Missouri community. While I had not yet developed any preconceived notions of general internal medicine, I also had never heard of the speciality of internal medicine. My ignorance was enhanced through my first year as I developed the false notion that "internal medicine" was simply a blanket term used to refer to the realm of nonsurgical subspecialities and that general internal medicine dealt only with the aged. With such ideas in mind, and a familiarity with what being a primary care physician meant, I believed my goal could only be reached by becoming a family practitioner - like my family's physician.

The Missouri Chapter, American College of Physicians (ACP) and the Missouri Society of Internal Medicine (MSIM) introduced a program for the summer of 1994 which would allow medical students, at the end of their freshman year, to spend 4 weeks with a private practice general internist in a Missouri community. Similar externships already existed for family medicine, and that is what I initially planned on doing. However, because I was already familiar with what family medicine was, I wanted to take this opportunity to see what else was out there. I wanted to gain an appreciation for what internal medicine is and what role a general internist plays in


Community-Based Teaching of Internal Medicine
to First Year Medical Students –
The 1994 University of Missouri-Columbia Experience
J. Christopher Bauer (Student), Frederick R. Bode, MD FACP

Chris Bauer was awarded an expense paid trip to the 1995 ACP annual meeting in Atlanta to present a poster of his winning abstract on his experience with community based teaching. Dr. Fred Bode with Chris Bauer.

delivering health care at the community level.

I was accepted to the externship program and was sent to Marshall, Missouri where I worked under my mentor, **Jack Uhrig, MD, FACP** and his colleague, C. **Allen Scott, MD, FACP**. From the beginning I was treated like part of the team, and I was integrated into nearly every aspect of providing patient care. This included routine checkups, care of common illnesses, inpatient care, critical care medicine, emergency medicine, and various procedures such as flexible sigmoidoscopy, EGD, and pacemaker implantation. Furthermore, I learned a great deal about interpreting EKG's, exercise stress tests, echocardiograms, pacemaker function, treating heart failure, assessing patients status post myocardial infarction, cardiac arrhythmias, COPD, diabetes mellitus, hypertension, and various GI problems. All of these activities were great clinical correlations to my courses in the first year of medical school. And, as I had set out to do, I developed an appreciation for the unique role which a general internist plays in delivering primary health care services to the adult population. I learned that general internists care for most medical problems that their patients develop. They extend this continuity of care by being uniquely qualified to continue to treat those patients through very severe illnesses.

The knowledge and perspective I gained from the externship is invaluable. It gave me a firsthand experience of private practice and community medicine which I could otherwise not have had during my medical education. It enhanced my interest in becoming a primary care physician by increasing my appreciation for the variety of skills a generalist must possess while showing me the options I have in reaching my goals. I believe that this program, and similar ones in family medicine, should be expanded so more medical students are able to participate. This would act to stimulate interest in, and attract medical students to, general internal medicine and family medicine by simply educating them as to what the specialties really are about. MoMed

Community-Based Teaching of Internal Medicine

Chris' comments reveal a fascinating challenge. How many students in medical school still share the view that internal medicine is "simply a blanket term used to refer to the realm of nonsurgical subspecialities?"... and after more students participate this summer externship program in internal medicine, how many will be attracted to "internal medicine and family medicine by simply educating them (firsthand, on-site) to what the specialties really are about?"

Sara E. Walker, MD, FACP, ACP, Governor for Missouri, initiated the externship. It was patterned after a similar program set up by the ACP chapter in Wisconsin. The MSIM has worked closely with ACP to ensure the program's success.

Ten students participated in 1994. During the 1994 annual Missouri meeting of the ACP at Lake Ozark, the ACP Governor's council recommended that the number of students funded for the program be increased to 20 (five from each medical school) in 1995. This project is under the direction of **John S. Farrell** of St. Louis. They key contact people in each Missouri medical school are: **Frederick Bode**, University of Missouri-Columbia; **Larry King**, St. Louis University; **Loretta Loftus**, University of Missouri-Kansas City; **Megan Wren**, Washington University.

Nationally, a Community Based Teaching (CBT) Task Force has been organized to help marshal the resources necessary to attract and teach students and residents interested in primary care internal medicine. A newsletter is being developed to keep interested individuals informed of progress in this area and a program for instruction about useful teaching skills in Community Based Teaching has already been funded and preliminary trials are underway. If you want to be on the national mailing list for the Community Based Teaching Project newsletter, please contact the project office (1-800-523-1546, ext. 2615 or 2614). With the grass-roots approach to attracting medical students to a career in internal medicine, we have a golden opportunity to put our best foot forward to interest more students to the challenging field of primary care internal medicine.

- Frederick Bode, MD

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SMA's meeting can be fun for your entire family with a host of social, enrichment, and sightseeing activities! (SMA's famous President's Night Dinner Dance will feature a tribute to Andrew Lloyd Webber and our favorite dancing band, the Pink Flamingos!)

For more information or to register, call the toll-free number below. All pre-registrants will receive a comprehensive copy of the meeting program in early May. SMA is going to show Missouri a great medical meeting!

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Manuscripts should be submitted to the editor, **J. Regan Thomas, MD,** P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as correspondent and include his or her address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language:

"In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Designate one author to serve as a corresponding author and include his or her complete address, telephone and fax numbers.

Manuscripts

Manuscripts should be typewritten and double-spaced. A synopsis-abstract of no more than 75 words should accompany the manuscript. The manuscript should not exceed 3,000 words.

Please include the original and two copies for review. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the authors should accompany the manuscript. Please submit manuscripts on floppy disks or diskette labelled with the version of wordprocessing used.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, year, volume number, and page numbers.

Example:
1. Galata JF, Blue JM, Gaines RW. Osteochondroma of the scapula. *Missouri Medicine* 1995;92:95-97.

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Stereotactic External Beam Irradiation Using a Linear Accelerator: The Washington University Experience

Joseph R. Simpson, MD, Keith M. Rich, MD, Robert E. Drzymala, PhD, Todd H. Wasserman, MD, Eric E. Klein, MS, Martha Michaletz-Lorenz, CMD, Janet Maurath, RTT, and Eric Filiput, RN

From February 1989 to December 1993, 139 patients with a variety of brain lesions were treated with stereotactic external beam irradiation using a 6MV linear accelerator. The largest group consisted of patients with recurrent brain metastases (n=46). Twenty seven patients had malignant gliomas, most of which were recurrent. Several benign conditions were treated, including arteriovenous malformations (n=27), acoustic neuromas (n=9), meningiomas (n=7), and pituitary adenomas (n=2). Durable responses were seen in the majority of patients with transient, mild, side effects. This experience suggests that stereotactic external beam irradiation is a safe, reliable, and effective method for non-invasive treatment of selected patients with small, localized brain lesions.

Stereotactic delivery of a single high dose of sharply collimated irradiation has recently become a treatment alternative for a number of intracranial lesions, usually arteriovenous malformations (AVMs) or metastatic tumors. The procedure is most commonly done under the direction of a team consisting of a neurological surgeon, a radiation oncologist, and a medical physicist. The irradiation source may be a modified linear accelerator,[1] a dedicated device with multiple fixed cobalt sources (gamma knife),[2] or a particle beam accelerator.[3] The treatment may be called stereotactic external beam irradiation (SEBI),[4] stereotactic radiosurgery[2,5,6], or simply radiosurgery.[7-9] A radiobiological rationale for the advantages of SEBI has been published recently[10] and increasing use is being reported.[5,8,9,11]

In February, 1989, treatment of selected intracranial lesions with SEBI using a modified Varian 6MV linear accelerator, was initiated at Washington University Medical Center. The method was modeled on the technique developed at the Joint Center for Radiation Therapy in Boston[1] which used multiple rotational arcs and an extended collimator system. This paper describes our methodology and early results.

Materials and Methods

Patients with a well-circumscribed brain lesion < 4 cm in maximum diameter located at a distance of > 0.5 cm from the optic chiasm were considered for SEBI. Prior radiation therapy did not preclude SEBI treatment. Prior to each treatment, several quality assurance procedures were performed.[12] These determined the proper operation of the linear accelerator and the Brown-Roberts-Wells (BRW) stereotactic system used. Included in the checks were proper alignment of the radiation beam with the isocenter, patient alignment on the linear accelerator, radiation output calibration, and operation of safety devices.

Central to the treatment procedure was the use of various stereotactic accessories. A BRW stereotactic ring, compatible with either CT, MRI, or angiography, was placed on the patient prior to imaging and the lesion was visualized. Treatment target location(s) was then determined using specialized planning software and the BRW stereotactic localizer acces-

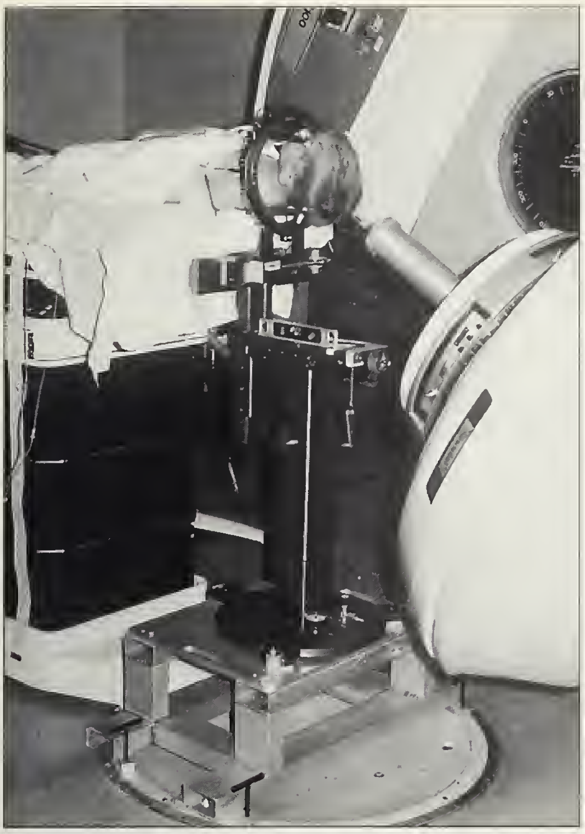

Figure 1. Patient in treatment position.

Table 1. Diagnoses of Patients Treated at WUMC

	No. Patients
Metastatic	46
Arteriovenous malformation	27
Glioblastoma multiforme	18
Anaplastic astrocytoma	9
Acoustic neuroma	9
Meningioma	7
Low grade mixed glioma	6
Juvenile pilocytic astrocytoma	5
Hemangioblastoma	3
Pituitary	2
Ependymoma	2
Craniopharyngioma	1
Chondrosarcoma	1
Glomus jugulare	1
Nasopharynx	1
Seizure disorder	1
Total	139

Other Reported Uses of SEBI:

- Arterial aneurysm
- Carotid-cavernous fistula
- Cavernous angioma
- Functional radiosurgery
- Germinoma
- Lymphoma
- Medulloblastoma
- Oligodendroglioma
- Pinealoma
- Venous angioma

sory frame. Computer treatment planning was done with a Silicon Graphics workstation and a MacIntosh dose calculation program with allowed selection of appropriate target isocenters and collimator sizes and a review of the dose distribution in both target(s) and nearby normal brain tissue. The localizer rods appeared in the images and served as a spatial reference to correlate target loci in the image set with their corresponding stereotactic coordinates. The stereotactic ring provided rigid immobilization of the patient's head and permitted accurate positioning of the target(s) at the isocenter when attached to the BRW base stand, which was mounted on the accelerator's patient support assembly turntable. Once the patient was in position, the geometry of the head was verified and beam-on time calculated. Treatment immediately followed.

The beam arrangements used most often consisted of four noncoplanar arcs intersecting at the isocenter. The isocenter consistently remained within 0.8 mm on verification filming of the arc positions prior to treatment. Figure 1 shows a patient in treatment position. Adult patients were treated with local anesthesia for frame placement supplemented by intravenous sedation as needed. Pediatric patients received general anesthesia.

Results

There were 134 adults and 5 children (under 16 years of age) treated. Four patients were treated on more than one occasion. The majority of patients had a single lesion irradiated with a single isocenter, but depending upon the shape of the target, two or even three isocenter locations were occasionally required. The doses of irradiation used were chosen to reflect the projected 1% to 3% risk of radiation necrosis based on AVM studies. Such doses depend on field size or volume irradiated.[3,7,8] The doses ranged from 1000 to 3000 cGy in a single fraction calculated at the 50% to 100% isodose line. This produced maximum isocenter doses of 1000 to 3600 cGy. Multiple isocenter treatments resulted in doses higher than the maximum single isocenter dose within small intralesional volumes. The most common uses reported and the diagnoses of patients in our series are shown in Table 1.

Continued on page 190

Continued from page 189

The endpoint for assessing treatment outcome differed depending on the diagnosis. For AVMs, it was obliteration of the nidus on follow-up angiography. This usually occurs 18 to 24 months after treatment and has been seen in 14 of 27 patients to date on serial follow-up. Figure 2 shows a before and after arteriogram of a patient with a 3.2 cm AVM in the posterior frontal lobe treated to 1800 cGy at the 80% isodose line using a 35 mm collimator. At 1-year follow-up, minimal residual AVM was visualized. Tumor endpoints were disappearance of the lesion, reduction in size of the lesion, lack of growth on subsequent serial computed tomography (CT) or magnetic resonance (MR) studies or survival.

The median survival times for the major categories of patients treated is presented below. Nine patients

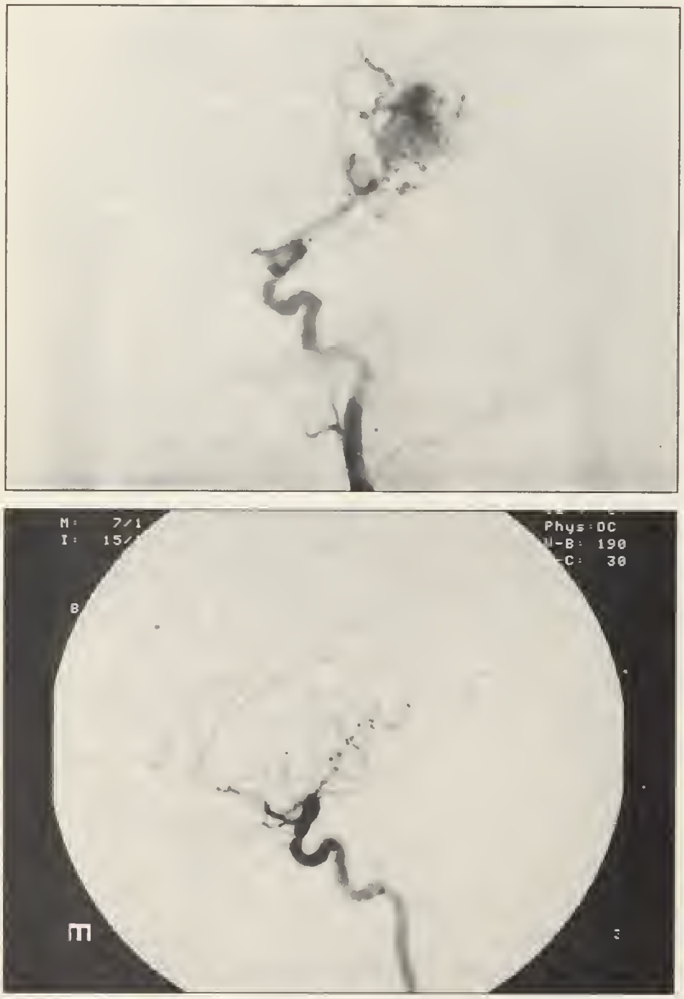

Figure 2. Before (A) and after (B) treatment arteriogram for patient with 3.2 cm AVM in posterior frontal lobe treated with SEBI. Minimal residual AVM is visualized at 1 year.

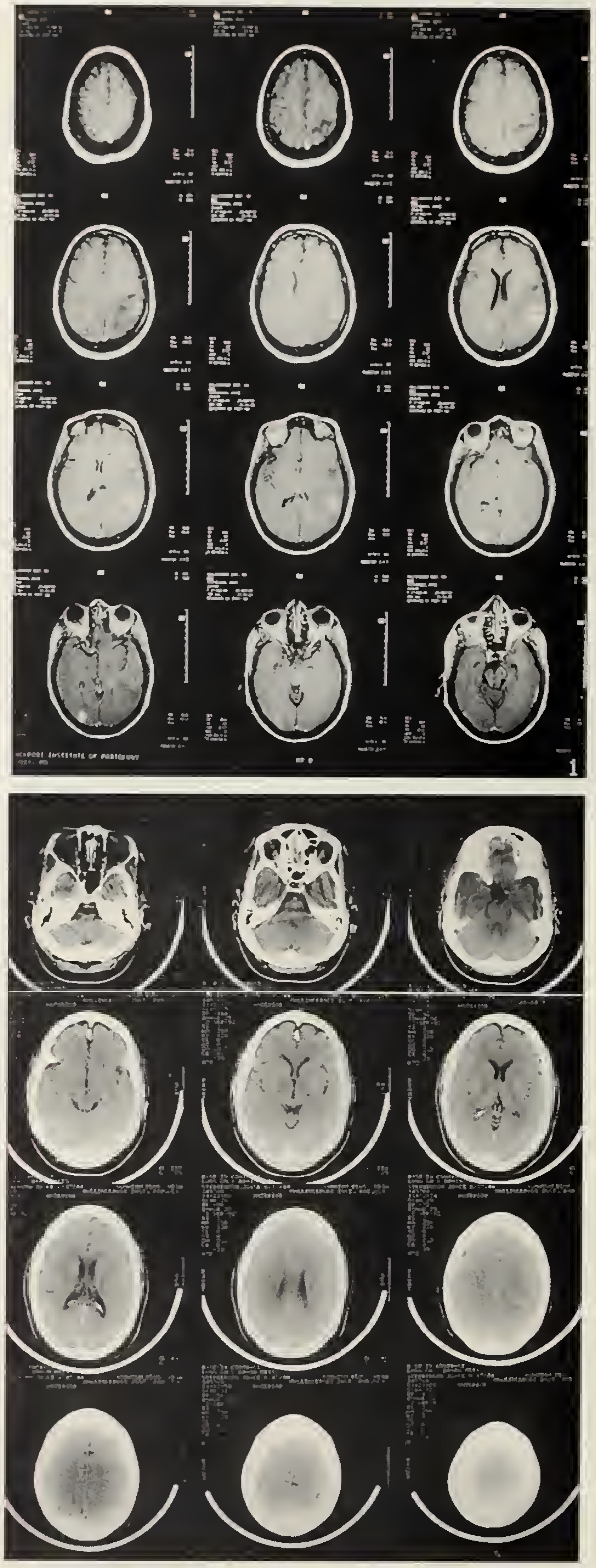

Figure 3. MR scan before treatment (A) and CT scan after treatment (B) for patient with several brian metastases treated with whole brain irradiation and stereotactic boost to two of the larger lesions.

with recurrent anaplastic astrocytomas were treated to target sizes ranging from 15 mm. in diameter to a 30 and 35 mm dual isocenter target. The survival time post-treatment ranged from 2 to 35.5 months with a median of 8.5 months. Three of nine patients are known to have expired 2 to 8.5 months following treatment. The survival time of those remaining alive ranged from 5 to 35.5 months. Eighteen glioblastoma multiforme patients were treated, 16 of whom had recurred. Ten patients have expired. Median survival for expired patients was 9 months following retreatment. The range of follow-up for those still living is 3 to 42 months. The largest treatment group contained patients with recurrent metastatic tumors (n=45). Most of these had lung primaries. Follow-up times post-treatment ranged from 2 to 21 months with a median of 7 months. Of the patients who expired, the median time to expiration following treatment was 5 months with a range of 2 to 21 months. Figure 3 shows an MR scan before and CT scan after treatment of a patient with several brain metastases treated with whole brain irradiation plus a stereotactic boost to two of the larger lesions. The scan remained normal for over 1 year after treatment. Figure 4 shows the isodose distribution for a patient with a solitary metastasis in the pons, illustrating the steep dose fall off from the margins of the target. This patient was alive and well more than two years following SEBI. One patient with a glioblastoma multiforme relapsed early and was treated with stereotactic irradiation 3 months after initial therapy. More than 32 months after retreatment, he continued to work full-time and function normally. Some patients with recurrent gliomas appeared to show little benefit from SEBI with evidence of progression within 3 to 4 months. They tended to have tumors that were irregularly shaped and/or rather ill-defined on CT or MR images.

Side Effects

Tolerance of SEBI was quite good. One case of symptomatic necrosis occurred. Seizures occurred transiently following SEBI in four patients. An increase in hemiparesis was seen in two AVM patients. One patient treated with two

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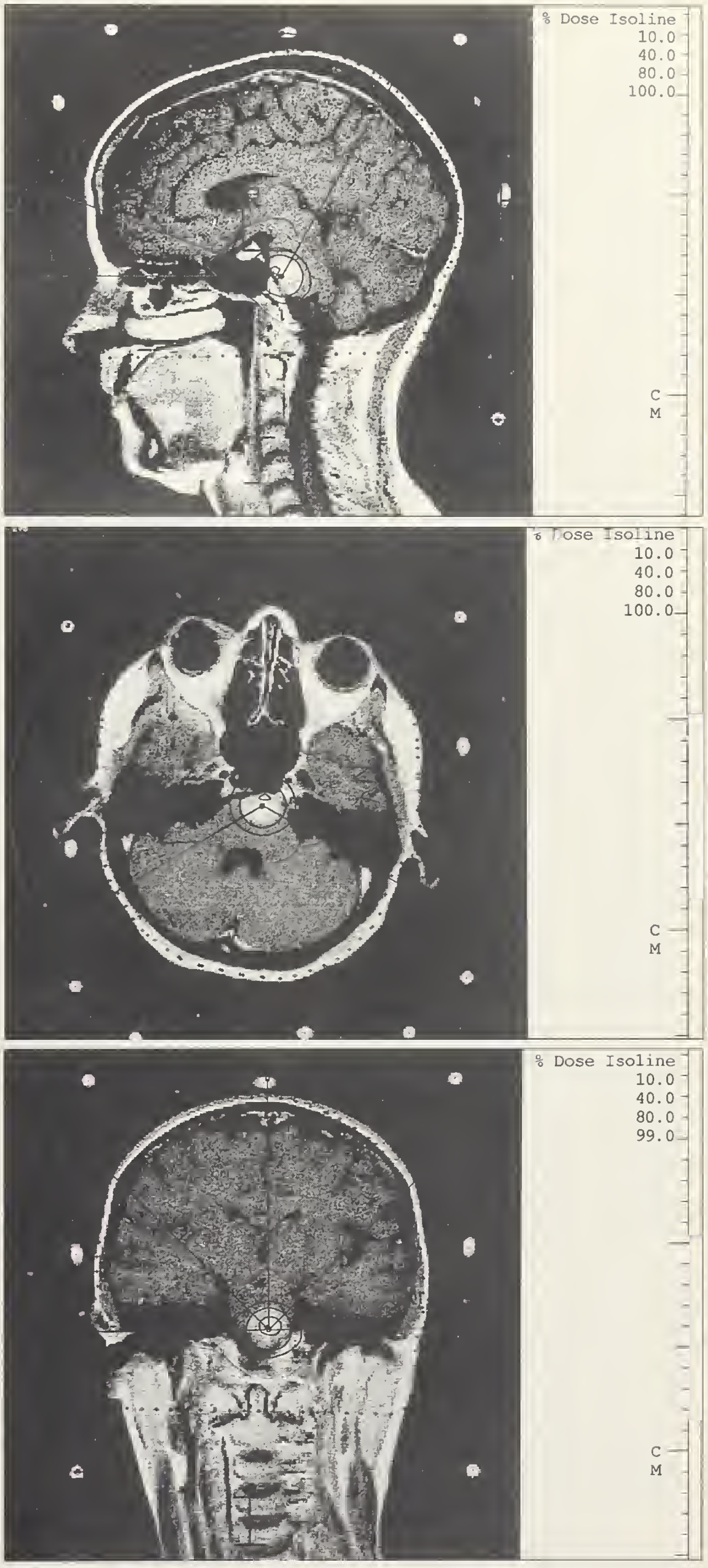

Figure 4. Isodose curves for patient with a solitary metastasis in the pons showing steep dose fall off from margins of tumor (A - saggital, B - transverse, C - coronal). The lesion is encompassed by the 80% isodose line.

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isocenters for a recurrent acoustic schwannoma developed an increased facial nerve palsy 6 months after treatment. This complication has previously been reported in 15% to 18% of patients and appeared related to the length of nerve irradiated.[13]

Discussion

Suitable lesions for SEBI are generally those which are < 4 cm in greatest diameter and located in areas where high doses of irradiation to critical normal structures can be avoided. The efficacy of SEBI in AVMs has been well established[2-4,14] with nearly an 80% obliteration rate by two years reported. Solitary brain metastases have been reported to be locally controlled in 73% to 98% of cases.[5] Recently SEBI has been used to treat primary brain tumors, both initially and at recurrence.[5,9] There have been several reports from Scandinavia[2] and Europe[6,11,15] suggesting favorable responses in these patients. We are currently participating in a dose-seeking trial carried out by the Radiation Therapy Oncology Group (RTOG 90-05) to determine the tolerance to SEBI in recurrent primary or metastatic brain tumors as related to tumor size. A protocol using SEBI as a boost in primary malignant gliomas has also just been opened by the Group. A pilot study from Boston using SEBI as a boost in primary malignant gliomas reported a 26 month median survival for selected patients.[9] The very sharp decrease in dose at the edge of the treatment field has allowed SEBI to be used safely in dose escalation trials and in previously treated patients. The sequelae of high dose single fractions are being better elucidated[7,8,11,16] and therapeutic ratios may be further enhanced by the use of hypoxic cell radiation sensitizers such as etanidazole or by fractionated SEBI. Clinical trials are ongoing at an increasing number of institutions. We conclude that SEBI offers potential for improved treatment results for several groups of patients with small, well circumscribed brain lesions.

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Post Tympanostomy Otorrhea

Walter A. Schroeder, Jr., DO, MD, FACS

Myringotomy with placement of ventilation tubes is the most common pediatric otolaryngologic procedure in the United States. Otorrhea is generally recognized as the most common complication of this procedure. The current study is a three-year prospective evaluation of post tympanostomy otorrhea to determine what variables might be associated with otorrhea. Analysis of patients from a predominantly rural population is presented.

Myringotomy with ventilation tube insertion has been performed since Armstrong's presentation in 1954.[1] The most common complication of the procedure is otorrhea which can present any time during patency of the tube.

Multiple authors have presented data on otorrhea and its frequency. The incidence range from 3.1%[2] to 37.9%.[3] Otorrhea appears to be related to the disease of the middle ear cleft or continuation of a middle ear infection as opposed to the type of tube inserted.[4] Studies regarding the use of topical or systemic antibiotics to decrease or eliminate otorrhea have been non-conclusive.[5] Most studies of otorrhea have involved inner city or urban population groups. Rural populations are seldom studied. A variety of variables might be associated with the incidence of otorrhea, whether immediately following surgery or sometime during the postoperative course.

Age, sex, seasonal variation, and the presence of ear effusion at the time of surgery are variables that might correlate with post tympanostomy otorrhea. The current study is designed to determine which variable might be associated with otorrhea in a rural population.

Methods

A prospective study involving patients who were to undergo tympanostomy and tubes was designed to study the incidence of otorrhea. All patients from February 1, 1990 through February 1, 1993 entered into the study. The age range was from approximately seven months of age through seventeen years. The age category was divided into three groups: those children less than two years of age, those from two through five years of age, and those greater than five years of age.

Indications for Surgery

Indications for tympanostomy

1. Unsatisfactory clinical response to anti-microbial treatment of acute otitis media, or onset of acute otitis media in a patient who is already receiving an anti-microbial drug(s).
2. Chronic otitis media with effusion that has been present for at least two months and is not improving progressively, the duration of which is either documented or evident from the history.
3. Recurrent episodes of acute otitis media despite conventional medical treatment.

Indications for adenoidectomy

1. History of four or more attacks of otitis media during the previous year.
2. A posterior nasal obstruction that is severe enough to cause mouth breathing.

Continued on page 194

Continued from page 193

Indications for tonsillectomy

1. Recurrent or chronic tonsillitis as evidenced by either:
    a. Four or more episodes of tonsillitis with anterior cervical adenitis during previous year or
    b. with associated positive cultures for beta strep.
2. Posterior nasal obstruction severe enough to cause mouth breathing.

The date of surgery was noted and recorded as one of four seasons.

All patients had surgery performed under general anesthesia at one of the hospitals or an outpatient surgical center. All surgeries were done by the author. The study noted children who had prior sets of tubes before entry into the present study. In addition, patients who underwent other procedures such as tonsillectomy and/or adenoidectomy were also noted.

Fig. 1

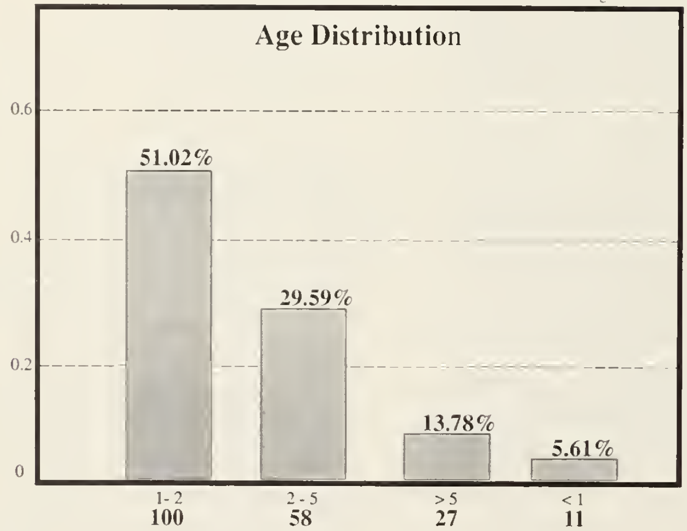
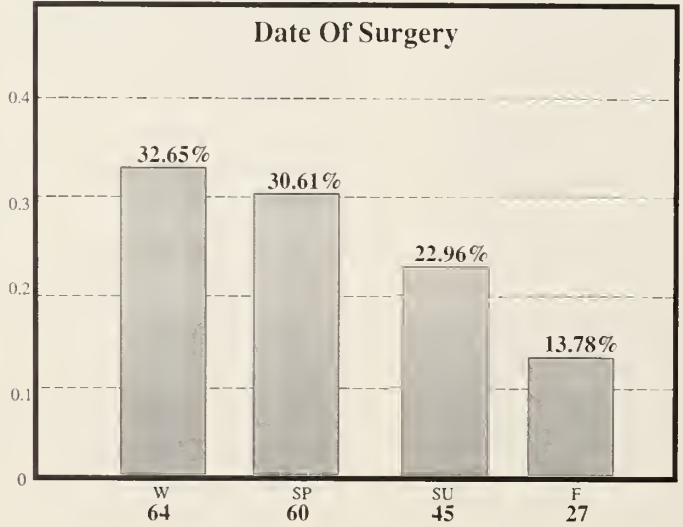


Fig.2



The presence or absence of middle ear effusion at the time of surgery was noted and described in the operative report. The middle ear was either reported to be dry or contained serous or mucoid effusion.

Armstrong type ventilation tubes were placed followed by Cortisporin Otic Suspension drops and a cotton ball in the meatus. Patients were advised to use the Cortisporin drops three times a day on the day of surgery and the first postoperative day. Patients were advised to limit water exposure to the ear canal while bathing or swimming during the length of patency of the tubes.

All patients were seen postoperatively one or two weeks following the surgery. Otorrhea was defined as any drainage in the ear canal or any drainage extruding from the lumen of the tube. The otorrhea was classified as either serous or mucoid. Patients were to notify the office anytime otorrhea was noted. Serous otorrhea was treated by instillation of Cortisporin drops over a two day period. Mucoid effusion or persistent otorrhea was also treated with ten days of an oral antibiotic. Patients were followed during the postoperative course for at least four months.

Results

During the period of the study, 501 patients underwent tympanostomy with tube insertion with or without a concurrent procedure. Out of the 501 patients, 196 (39.1%) patients had at least one single episode of otorrhea during the postoperative course. Of the 501 patients, 61.9% had no postoperative otorrhea whatsoever.

Of the 196 patients, 89 (45.4%) were female; 107 (54.6%) were male. (Fig. 1) In the age range of 1-2 years there were 100 (51.0%) patients; 58 (29.6%) patients in the age range of 2-5 years; and 27 (13.9%) patients were greater than 5 years of age. The remaining patients (5.6%) were less than one year of age. (Fig. 2)

Date of surgery was evaluated by season. Winter was considered December through February; Spring was considered March through May; Summer was considered June through August; and Fall was considered September through November.

During the Winter, 64 (32.6%) patients had surgery. Another 60 (30.6%) patients had surgery in Spring. In the Summer, 45 (22.9%) patients had surgery, and only 27 (13.8%) of the patients had surgery in the Fall. (Fig. 3).

Before the study had begun, 38 (19.4%) of the patients had prior insertion of tubes. Sometime during the three-year study, 63 (32.1%) patients had a repeat set of tubes.

Other procedures were performed during the three-year study on 103 patients. Tonsillectomies and adenoidectomies were performed on 69 (35.2%) patients. Another 34 (17.3%) patients had concurrent adenoidectomy.

Effusion at the time of the surgery was noted and recorded in the operative note. Of the patients, 53 who had post tympanostomy otorrhea had no effusion whatsoever noted at the time of surgery; 124 (63.2%) had a mucoid or seromucinous effusion at the time of surgery; and, 19 (9.6%) had a serous effusion at the time of surgery. (Fig. 4)

Postoperative otorrhea was noted during the course of tube placement. Of the 196 patients, 7 patients had an immediate postoperative otorrhea. This was believed to be effusion at the time of the surgery that persisted during the first several days following surgery. This was considered to be intraoperative disease and not a recurrent infection following surgery. Fifty-eight (29.6%) patients had at least one episode of serous otorrhea.

Forty-three (21.9%) patients had a single episode of mucoid effusion sometime during the postoperative course. Seventy-three (37.2%) patients had two or more mucoid effusion episodes during the course of the tube patency. (Fig. 5)

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Fig 3

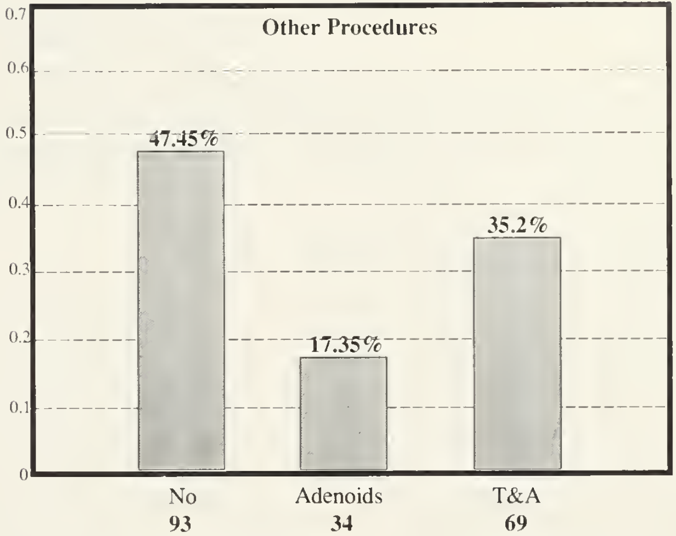


Fig.4

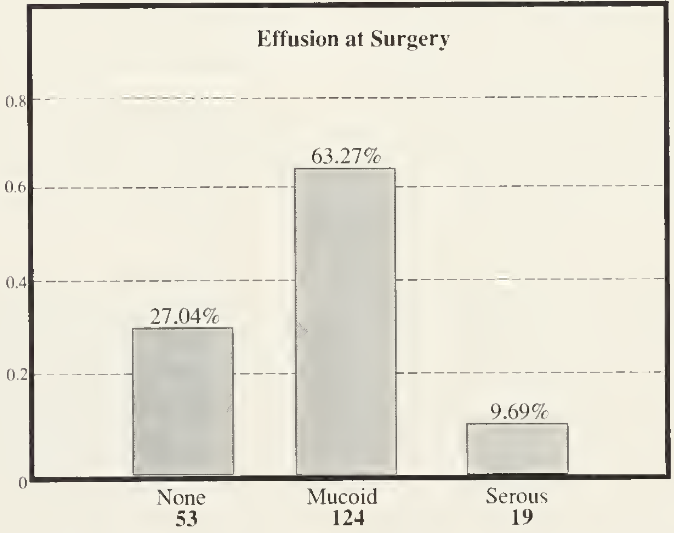
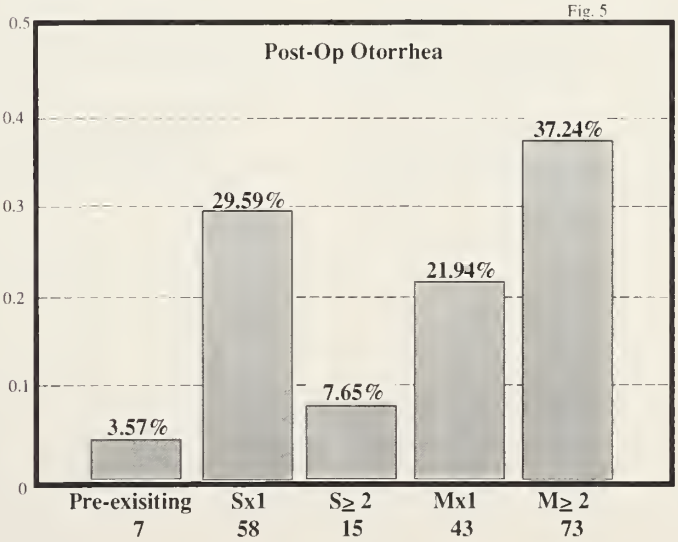


Fig. 5



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Discussion

Tympanostomy otorrhea is the most common complication following tube insertion. The otorrhea is usually treated with a topical antibiotic with or without the use of an oral antibiotic. In patients with persistent otorrhea the use of saline irrigation with cleansing or the ear canal is appropriate.

Approximately 62% of the patients in this study that developed postoperative otorrhea had surgery in either Winter or Spring. Otorrhea appears to be disproportionate during the Winter and early Spring months. This finding is similar to the finding of Scott et al.[6]

The placement of prior tubes does not appear to have any relation to post tympanostomy otorrhea. Only approximately 20% of the patients who developed otorrhea had prior tubes. Thirty-two percent of the patients who had repeat tubes during the course of the study had post tympanotomy otorrhea.

Fifty-two percent of the patients who developed post tympanostomy otorrhea had some other concurrent procedure performed. This finding might suggest that patients with adenotonsillar pathology might be a greater risk for post tympanostomy otorrhea compared to patients who have only recurrent episodes of acute otitis media or patients with chronic serous otitis media. Sinus disease, acute or chronic, might also be a contributing factor in post tympanostomy otorrhea.

Conclusion

The study confirms that post tympanostomy otorrhea is a common complication following tympanostomy and tube insertion. The current study reveals a higher than average post tympanostomy otorrhea than many other previously reported studies. Variables that might be associated with this might be the exposure of the patient to environmental smoke and/or the placement of the child in a day care facility. These variables were not investigated during the course of study.

Exposure to cigarette smoke has been shown to increase the risk of otitis media and effusion.[7]

The routine use of topical antibiotic otic solutions following tympanostomy and tube placement in this patient group has not been shown to reduce the incidence of otorrhea. The current study suggest that otorrhea in this particular patient population appears to be more common than what has been previously reported. Additional study of this population is warranted.

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50 Years Ago

The 1945 Annual Session of the Missouri State Medical Association was cancelled in accordance with the ruling of the Office of Defense Transportation. The cancellation included the House of Delegates. The current officers and councilors continued until the next annual session. Committee business that could not wait was handled by the Council.

100 Years Ago

A paper presented at the 38th Annual Meeting of the Missouri State Medical Association held in the opera house, Hannibal, Missouri, May 21, 1895.

Some Surgical Sins *(excerpt)*

By Emory Lanphear, MD, PhD, St. Louis, Missouri

Fourth Sin - Pretending to be Clean but Failing.

Everyone knows the inestimable value of asepsis; most surgeons pretend to practice it; nearly all fail. The clean (ideally, surgically, truly clean) surgeons of America do not number a dozen! I know them - I mean the leaders of the profession, not the hewers of wood and tillers of soil, the common, every-day workers like you and me, but the men to whom we look for guidance. Why, I saw a "professor of surgery" in one of the leading schools in America, not long since, making a thyroidectomy before class; his spectacles fell into the wound; he picked them out, deliberately readjusted them and went on about his work as if nothing had happened; and in reporting the case subsequently he wondered why he had pus in the wound - yet he would be scandalized if I were to assert that he doesn't practice aseptic, modern surgery! He thinks he does. It is just that kind of men who commit my "Fourth Sin." They are the men I am after, and they are not confined to America, either; England has but few men who are doing ideal work, and the continent is nearly as bad - or it has changed wonderfully since my last visit.

The points of failure are: (1) Dirty finger nails. Lawson Tait's remark that, "the high mortality rate in abdominal surgery found in the work of German surgeons is easily accounted for - they don't clean their finger nails," is applicable to the methods of some surgeons not Teutonic. Too many operators simply scrub the hands for a few minutes, wipe them upon a towel, wash in bichloride solution for an instant, and then proceed to operate.

Doctor! Does that apply to you? Now you know well enough that after carefully scrubbing your hands for several minutes you ought to dry them and closely trim the nails; then scrub with much soap and muscular energy for five minutes more; and then sterilize them by (a) immersion in alcohol for at least two minutes, and then washing in sublimate solution, or, (b) washing in saturated solution of potassium permanganate until hands and arms are of a mahogany color, decolorizing in a saturated solution of oxalic acid, and finally rinsing in sublimate solution, 1 to 1,000 and then in boiled water. You know you ought to do this before every laparotomy (beg pardon - coeliotomy), trephining, thyroidectomy, resection of joint etc., - but do you do it? If not, you are guilty and need a little censuring. (2) Carelessness in touching clothing, table, pulse of patient, handle of pitcher, etc., during an operation, and then going on without further washing, is entirely too common with those who are perfect in their methods of preparation. One of America's greatest teachers, writers and operators - a man of who we are all proud - has to be constantly watched by his assistant in regard to this department of the "fourth sin;" in his enthusiasm, he forgets his own precepts. "To err is human." There is some satisfaction in knowing that Missouri does not have all the sinners. We all should be more particular about contamination of our hands and instruments during capital operations. Eternal vigilance is the price of - asepsis. (3) Carelessness in keeping and handling gauze. (a) It is too common a practice to deep dry gauze wrapped up in a paper which is hurriedly unrolled and handled with dirty fingers in cases of haste. If kept dry, a necessity with the iodoform variety, it should be rolled in aseptic, oiled paper, and placed in a tin box which closes tightly, and occasionally resterilized by heat. Preferably, gauze should be kept in a glass jar, in sublimate solution; tightly closed; and a dirty hand never thrusts down after a piece. Personally I keep two jars - one for dressings for pus cases, of which I am not so careful; the other for operations and aseptic dressings - from which the pieces are taken by means of a pair of forceps, sterilized by passing through the flame of an alcohol lamp before insertion in the jar. (b) Gauze is too often cut with scissors not sterilized, especially in making dressings. I know a surgeon of more than local reputation who invariably cuts his gauze for dressings with scissors taken from his velvet-lined pocket case; and he is a teacher, too. But that does not make it right. (c) Allowing assistants or nurses with suspicious hands to cut the gauze is just as bad. I recently saw a "trained" nurse in a hospital assisting at a removal of the breast; she was cutting gauze for "sponges" - moved the slop-jar under the table for the surgeon, handed the ether can to the anaesthetizeur, and continued cutting gauze without a thought of washing. Such cattle ought to be taught the value of the Hindoo proverb: "Cleanliness is the key to heaven."

(4) Improper selection and management of instruments. (a) Those without metal handles - so that sterilization by boiling or otherwise is impossible; (b) those with old-fashioned joints - so that perfect cleaning is unattainable; (c) failure to scrub and boil all instruments immediately after operation in septic cases.

Fifth Sin - UNDERCHARGING, IN ORDER TO SECURE AN OPERATION.

This is a sin too often committed by men who stand high in the profession; and this assertion is no idle figment of the imagination, either. As a young man, I am often compelled to bear the brunt of the sins of older men. For example, a physician in northern Kansas made all arrangements for me to operate for an ovarian tumor; a banker's wife; fee agreed upon, $500. The patient arrived at the hospital during my temporary absence from the city; banker "accidentally" fell into conversation with another, an older surgeon, who remarked that $250 was his (or to be charitable, perhaps he may have said the) usual charge for such an operation; banker, on inquiry of nurses, physicians, etc. found this man to be "the best surgeon in the city," and he was $250 "ahead;" I was $500 "out." Many such experiences have been mine; 'tis the fate of the young man, and the meek.'

Hic fabula docet - but this isn't a fable, and really is not supposed to teach anything, except, perhaps patience - which, like the poor, the young surgeon must have always with him.

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CME Calendar

APRIL

1 - Columbia: Advanced Otitis Medica Workshop. 3.8 credit hrs. Call Laurie J. Seigel, 314/882-4105.

4 & 5 - *St. Louis*: Transesophageal Echocardiography. 13 credit hrs. Call Dianne Reid 314/577-8897.

5 thru 8 - *San Francisco, CA*: 11th Annual Advances in Emergency Medicine. 20 credit hrs. Call 415/476-5208.

5 thru 8 - *San Francisco, CA*: Annual Scientific Sessions of the International Society for Heart & Lung Transplantation. 26 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

6 - *St. Louis*: The Role of EBV and Ig/myc Translocation in the Genesis of Burkitt Lymphoma"

6 thru 8 - *St. Joseph*: 12th Annual Cardiac and Critical Care Conference. 16.5 credit hrs. Call Kelly Stuck 816/271-1225.

7 - *Springfield*: The Second Southwest Missouri Medical Director's Conference. Call William Rosen, fax: 417/836-3913.

7 - *Kansas City*: Symposium For and About Women Physicians. 6 credit hrs. Call Kim McChesney 816/932-5140.

7 - *Virginia*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth M. Paul 816/932-2301. FAX 816/932-5119.

7 & 8 - *St. Louis*: Advanced Trauma Life Support Provider/Provider Refresher Course. 16/9 credit hrs. Call Joyce Hope 314/577-8802.

7 & 8 - *Topeka, KS*: Dyslexia: Assessment & Clinical Management of Language-Based Disorders. 12 credit hrs. Call Menninger CME 1-800-288-7377.

7 & 8 - *St. Louis*: Neurosurgical Endoscopy. 14 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

7 - 9 *Arlington, Virginia*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth Paul 816/932-2301.

8 - *Columbia*: Oncology Conference: Cancer and the Primary Care Physician. 5.3 credit hrs. Call Laurie Seigel 314/882-4105.

8 - *Springfield*: 9th Geriatric Medicine Symposium. Call William Rosen, fax: 417/836-3913.

9 - *Virginia*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth M. Paul 816/932-2301. FAX 816/932-5119.

10 - *St. Louis*: Leroy Sante Lecture. Call R. Gilbert Jost, MD 314/362-7130.

20 & 21 - *St. Louis*: 27th Annual Matt Weis Symposium. 11 credit hrs. Call Judy O'Guin Brandes 314/569-6290.

21 - *Kansas City*: Laboratory Monitoring of Bleeding and Thrombotic Disorders. 5 credit hrs. Call Kim McChesney 816/932-5140.

21 & 22 - *Kansas*: The Trauma Victim in Partial Hospitalization. 12 credit hrs. Call Menninger CME 1-800-288-7377.

21 thru 23 - *Branson*: Spring 1995 Medical Update for Primary Care Practitioners. 5 credit hrs. Call 314/577-8167.

21 thru 23 - *Columbia*: Current Concepts in Pediatric Neurodevelopment and Rehabilitation. 16.5 credt hrs. Call Ken Steiner, 314/442-2963.

21 thru 24 - *St. Louis*: Surgery of the Hand and Wrist. Call CME 314/577-8167 or 1-800-553-2712.

24 thru 28 - *St. Louis*: The Medicolegal Death Investigator Training Course. 33 credit hrs. Call Mary Fran Ernst 314/522-6410, ext.6509.

25 - *Topeka, Kansas*: Understanding & Utilizing the Explosion in Antidepressant Pharmacotherapy. 7 credit hrs. Call Menninger Continuing Education 1-800-288-7377.

24 thru 28 - *St. Louis*: The Medicolegal Death Investigator Training Course. 33 credit hrs. Call Mary Fran Ernst 314/522-6410, ext. 6509.

25 - *Kansas City*: Perinatal Core Curriculum. 5 credit hrs. Call Carol Osborne 816/932-3737.

28 & 29 - *St. Louis*: Periorbital Repair and Reconstruction. Call CME 314/577-8167 or 1-800-553-2712.

28 & 29 - *St. Louis*: Microsurgical Techniques for Epilepsy and Intrinsic Brain Tumors. 20 credit hrs. Call 314/577-8167.

29 - *Kansas*: Integrated Treatment of Anxiety Disorders. 6 credit hrs. Call Menninger CME 800/288-7377.

29 - *Kansas*: Anxiety Disorder: Pharmacotherapy, Psychotherapy, and Integrated Treatment. 6 credit hrs. Call 800-288-7377.

MAY

2 - *Kansas City*: Neonatal Core Curriculum. 5 credit hrs. Call Carol Osborne 816/932-3737.

2 thru 4 - *St. Louis*: Cervical Spine Fracture Fixation. Call CME 314/577-8167 or 1-800-553-2712.

4 thru 7 - *St. Louis*: Comprehensive Review in Toxicology. 20 credit hrs. Call 1-800-443-3901.

5 & 6 - *Kansas*: Families in Transition: Divorce to Stepparenting. 12 credit hrs. Call 800-288-7377.

5 thru 7 - *St. Louis:* **Lumbar Spine Fracture Fixation.** Call CME 314/577-8167 or 1-800-553-2712.

8 - *St. Louis*: Transjugular Intrahepatic Porto-systemic Shunts (TIPS). Call R. Gilbert Jost, M.D. 314/362-7130.

8 - *Columbia*: Oncology Conference. Call Laurie Seigel 314/882-5666.

8 thru 10 - *Washington, DC*: 1995 Legislative Issues Forum. 14 credit hrs. Call 214/550-0911.

9 thru 11 - *St. Louis*: Color-Flow Doppler Echocardiography. 20 credit hrs. Call: Dianne Reid 314/577-8897.

10 thru 12 - *St. Louis*: Pediatric Advanced Cardiac and Trauma Support for Life. Pediatric Advanced Life Support Provider Course. 20 credit hrs. Call Mary Beth Foerstel 314/577-5385.

11 & 12 - *Overland Park, Kansas*: Current Management in Critical Care. Call Linda Smutz 816/523-3383.

11 thru 14 - *Florida*: Health Care Delivery Networks: Physician Integration. 11 credit hrs. Call 314/577-8167.

12 & 13 - *Kansas City*: Radiation Head and Neck. 10 credit hrs. Call Carol Osborne 816/932-3737 or 816/932-5119.

12 & 13 - *St. Louis*: 2nd Annual Current Topics in Cardiothoracic Anesthesia. 14.5 credit hrs. Call 314/362-6893.

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in **Missouri Medicine**. *Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.*

13 - *Kansas City*: Update on Diabetes and Thyroid Disease. 7 credit hrs. Call Gretchen Keefer 816/932-2021.

15 thru 20 - *St. Louis*: Health Care Ethics in a Pluralistic Society: The Catholic Perspective. 32.5 credit hrs. Call Donna Troy 314/577-8195.

18 & 19 - *St. Louis*: Focus on Pediatrics Infectious Disease. Call 314/569-6290.

18 thru 20 - *Kansas*: Intermediate and Advanced Workshops in Hypnotherapy. 14 credit hrs. Call 800-288-7377.

26 - *Springfield*: Neonatal Resuscitation Course. 6.75 credit hrs. Call Julie Hartley 417/885-6111.

JUNE

2 - *St. Louis*: Harkins Lecture. 4 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

2 & 3 - *Kansas*: Treating Children and Adolescents in an Era of Mental Health Reform. 12 credit hrs. Call 800-288-7377.

7 thru 9 - *Maryland*: Third International Symposium on Maritime Health. 14 credit hrs. Call Karen Mayer 202/994-3921.

7 thru 10 - *Washington, DC*: Second Annual Intensive Review of Internal Medicine. Call Deborah Grant 202/994-4285.

8 thru 11 - *Osage Beach*: MAFP 47th Annual Meeting. 18+ credit hrs.

9 - *Kansas City*: Immunization: Challenges, Motivators, New Directions Success. Call Robyn Karlin 913/588-6359.

9 & 10 - Columbia: Common Childhood Problems. 3.5 credit hrs workshop/9.5 credit hrs conference. Call Laurie Seigel 314/882-5666.

9 & 10 - *Kansas City*: Refractive Surgery: Controversies and New Frontiers - An International Symposium. Symposium, 12 credit hrs. Wet lab, 3 credit hrs. Call Sue Dunphy 816/881-6153. FAX 816/881-6246.

9 & 10 - *St. Louis*: 9th Annual Frontiers in Endourology. Advanced Laparoscopic Urology: The Best of the Present. Call 314/362-6893.

12 thru 17 - *St. Louis*: Health Care Ethics in a Pluralistic Society: The Catholic Perspective. 32.5 credit hrs. Call Donna Troy 314/577-8195.

14 - *Springfield*: Pediatric Advanced Life Support. 7 credit hrs. Call Julie Hartley 417/885-6111.

17 thru 21 - *Minnesota*: 17th National Lesbian and Gay Health Conference and 13th Annual AIDS/HIV Forum. Call Todd Belfield 202/994-4285.

21 & 22 - *St. Louis*: Advanced Trauma Life Support Provider/Provider Refresher Course. 16/9 credit hrs. Call Joyce Hope 314/577-8802.

21 thru 23 - *St. Louis*: The Sixth Annual Summer Geriatric Institute. Call Sue Wheat 314/577-8462.

23 & 24 - *St. Louis*: Neurosurgical Endoscopy. 14 credit hrs. Call CME 314/577-8167 or 1-800-553-2712.

24 thru 28 - *Virginia*: Third Annual Board Review in Family Medicine. 39 credit hrs. Call Maria Gorrick 202/994-4285.

25 thru 30 - *Wyoming*: Missouri Allergy & Endoscopic Sinus Surgery Update in the Tetons 1995. 31.2 credit hrs. Call Barry W. Kling, MSPH Director, 314/882-4105.

26 thru 28 - *St. Louis*: Pediatric Advanced Cardiac and Trauma Support for Life, Pediatric Advanced Life Support Provider Course. 20 credit hrs. Call Mary Beth Foerstel 314/577-5385.

JULY

27 - *St. Louis*: Pediatric Advanced Life Support Renewal Class. 7 credit hrs. Call Mary Beth Foerstel 314/577-5385.

29 & 30 - *Springfield*: Pediatric Advanced Life Support Provider Course. 17.4 credit hrs. Call Maryann Jeter, 800-835-5201.

AUGUST

11 & 12 - *Springfield*: Pediatric Advanced Life Support. 15 credit hrs. Call Julie Hartley 417/885-6111.

17 - *Springfield*: Neonatal Resuscitation Course. 6.75 credit hrs. Call Julie Hartley 417/885-6111.

SEPTEMBER

9 - *St. Louis*: Midwest Clinical-Molecular Cardiology Conference. Call 314/577-8167.

12 & 13 - *St. Louis*: Transesophageal Echocardiography. 13 credit hrs. Call Dianne Reid 314/577-8897.

22 & 23 - *St. Louis*: Surgery of the Knee. Call 314/577-8167.

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OCTOBER

2 thru 6 - *St. Louis*: The Medicolegal Death Investigator Training Course. 33 credit hrs. Call Mary Fran Ernst 314/522-6410, ext. 6509.

6 & 7 - *St. Louis*: Advanced Trauma Life Support Provider/Provider Refresher Course. 16/9 credit hrs. Call Joyce Hope 314/577-8802.

5 thru 7 - *St. Louis*: Contemporary Cardiothoracic Surgery. Call 314/362-6893.

6 thru 17 - *Prague, Vienna and Budapest*: Allergy Abroad '95. 21 credit hrs. Call 314/362-6893.

7 & 8 - *Washington, DC*: Sixth Biannual Gastroenterology Board Review Course.

8 thru 12 - *Virginia*: Medical Oncology Board Reivew Course.

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13 & 14 - *Springfield*: Pediatric Advanced Life Support. 15 credit hrs. Call Julie Hartley 417/885-6111.

15 thru 18 - *Arizona*: 17th Annual Meeting of the Society for Medical Decision Making. Call Marla Gorrick 202/994-4285.

17 thru 19 - *St. Louis*: Color-Flow Doppler Echocardiography. 20 credit hrs. Call Dianne Reid 314/577-8897.

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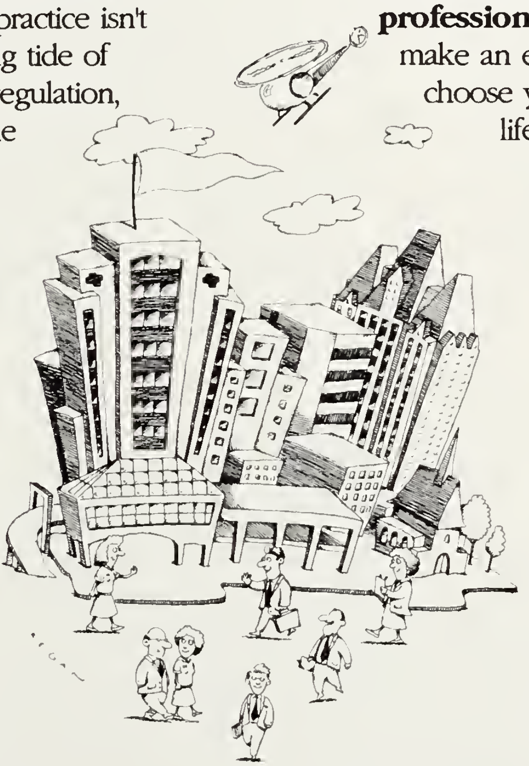

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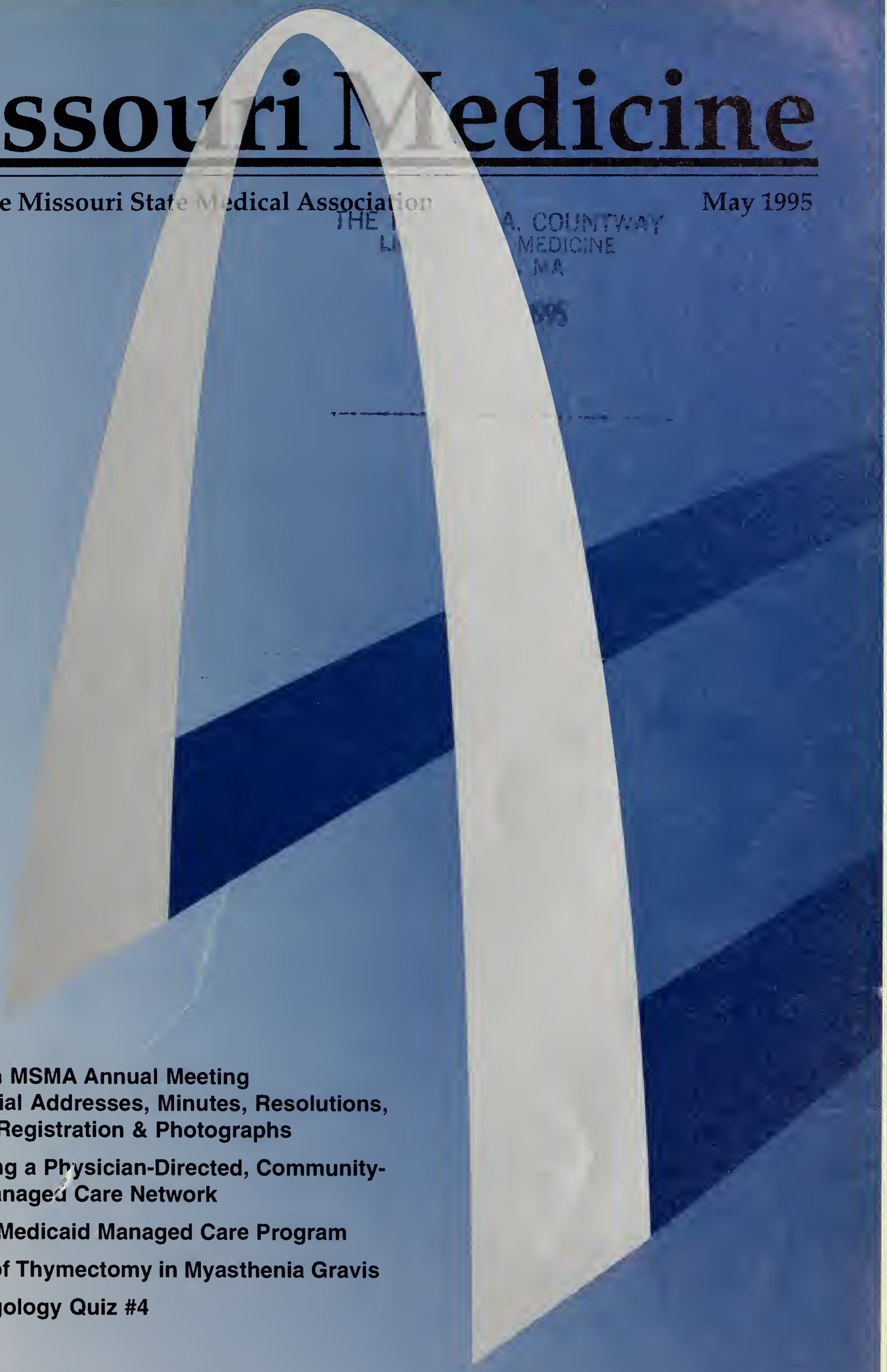

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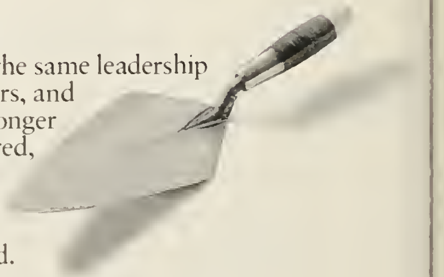

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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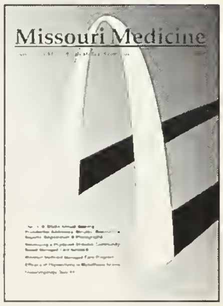
Printed by the Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri 65251.

MISSOURI MEDICINE

VOLUME 92, NUMBER 5

137th Annual Meeting of the Missouri State Medical Association

Minutes of the 137th Annual Meeting 230
Committee & Commission Reports 239
H. Jerry Murrell's Address to the House 244
Alliance Installation 246
Alliance Address to the House 247
Meeting Registration 249



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President's Inaugural Address 212
Frederick Hahn Jr., MD, FACS, MSMA President

Otolaryngology Quiz #4 225
Robert P. Zitsch III, MD

Physician Leadership

Developing a Physician-Directed, Community-Based Managed Care Network 216
Tom Bennett, Executive Vice President, MSMS, Inc.

Missouri Medicaid

Managed Care Plus (MC+): The Wave of the Future for Missouri Medicaid? 222
Ed Jenkins, MD

Scientific Section

Efficacy of Thymectomy in Myasthenia Gravis 252
Ghazala Hayat, MD, Yusuf Ata Mohyuddin, Keith Naunheim, MD

Membership Notes 228
CME Calendar 258
Classified Listings 260

Frederick W. Hahn, Jr., MD, Installed at the 137th Presidential Inaugural Ceremony

Presidential Inaugural Address given by Dr. Hahn, March 25, 1995, in St. Louis Ballrooms A,B,C, of the Adam's Mark Hotel, St. Louis, Missouri.

In October 1989, Judy, a beautiful 29-year-old special education teacher and bride of less then one year was driving to the small airport in hometown Iowa. She was to pick up her husband who traveled about the state in his work.

Her small car was in the left turn lane behind a van. She saw the green light above the van but the van blocked the associated sign that read "yield on green."

Judy, unwittingly pulled directly into the path of an oncoming auto. She initially did not appear to be injured seriously. She asked that someone notify her husband that she had an auto accident and was being taken to the hospital but was doing fine.

While being held for routine observation that evening, she became obtunded and then slipped into a progressively deepening coma.

The next morning, she was transferred to a hospital in Des Moines. A CAT scan revealed a bleed in the base of her brain, apparently from a torn vessel along the spinal cord.

An emergency craniotomy was carried out to decompress this hemorrhagic site. The combination of the bleed and the necessary surgery rendered extensive damage to the tissue at the base of the brain.

Judy had a tracheostomy and was placed on a ventilator. Surprisingly, she was able to be weaned from the ventilator and continued to breathe spontaneously. A gastrostomy tube was placed for fluid and nutritional support. However, she exhibited the typical spasticity and posturing of a high cervical injury, quadriplegia.

For 11 months she remained in this vegetative state with no perceivable change. Then one day she spontaneously opened her eyes. However, there was no other evidence of communicative efforts.

One day her father said to her mother, "I just wish we knew if Judy can hear us." He then positioned his face in front of Judy's face and said, "Judy, can you hear me?"

Judy blinked her eyes in a manner that perhaps only a parent would recognize as meaningful. Her father repeated the question, "Judy, can you hear me?" This time Judy blinked three times. This had meaning to dad!

Judy's parents had shared with interest as their daughter progressed through school and then delivered special education to "special" elementary children for some eight years. Dad knew that three blinks meant "Yes." Two blinks mean "No" and one blink means nothing as it is normal to blink once.

The three blink response brought on a barrage of "yes" and "no" questions. Her parents soon found that Judy would only respond if they positioned themselves directly in front of her. Thus, it became clear that she was reading lips, another skill that she learned and taught to "special" children.

With this glimpse of hope, Judy became eligible for a head trauma unit called "Rebound" which happened to be located in the hospital where I practice.

At this juncture, I was asked to assess her hearing status and administer any necessary tracheotomy care.

Our assessment rendered more

bad news. With the injury, Judy lost the function of the cochlear nuclei in her brain stem and is thus totally deaf. This fact also prevents her from being a candidate for a cochlear implant.

In the unit, she learned to abbreviate her communication. Rolling her eyes upward became "Yes" and rolling them downward became "No."

The special education people brought an alphabet board to her room. This consisted of a rectangular board with 26 letters of the alphabet divided into four compartments of five letters and the final one with six letters.

By following along the line with ones finger until she identified the appropriate box with a "Yes" blink and then identified the desired letter within the box with another "Yes," she could spell words, one letter at a time.

It soon became apparent that she was totally intact cognitively. She remembered events, birthdays and other historical information as well as any other young adult.

Her expectations remained high. Her "impossible dream" was that she would get well and one day have a family of her own. She was evaluated extensively but with improvement only in her communication skills.

Bottom line, Judy has a rare condition identified as the "Locked in Syndrome." She is deaf, totally paralyzed save for her eye movement, and even this is impaired in one eye, and yet there is a very viable high brain inside the "box."

Judy stayed in Rebound until her insurance ran out. Her parents converted their garage into an apartment for Judy. Her husband aborted this dreadful situation and departed through a painful divorce.

It was only through the court system that Judy acquired minimal long-term low skilled custodial assistance from her insurance company.

Currently her dad works days and her mother works nights. In their hours off work, they are her care givers. Her Medicare and Medicaid provide some assistance with physical therapy twice a week and necessary doctors' calls.

A very tenacious peer in the special education field has helped her acquire an ultra sophisticated computerized device triggered by a photo electric cell which monitors her eye blinks to the computer and displays her messages not only on the screen but via a female computerized voice not unlike your Japanese automobile that informs you, "your door is ajar."

Newly installed MSMA President Frederick Hahn, MD, Beverly Murrell, Marge Hahn, and MSMA Immediate Past President H. Jerry Murrell, MD.

Yes, Judy is locked in! But then, her parents are locked in as well. They spent a day and half away from her this year. The special nursing care for this break cost them over $500 which they could ill afford.

If there is such a thing as a bell curve for the Locked In Syndrome, Judy is at the extreme high end of that curve.

If we would but realize it, we as physicians are on this same "Locked In" bell curve.

Collectively, we too, are paralyzed by external forces over which we seem to have little control:

- state and federal government regulations,
- third party and managed care organizations,
- tort system injustices,
- antitrust threats,
- not to mention our personal home, family and community confines.

I hasten to add that we are further paralyzed by internal forces, or indiscretions, if you will:

- some of us are stubbornly resistant to change,
- some of us are hampered by simple greed,
- some of us are restrained by conceit,
- some of us are limited by desire for power, and the majority of us are paralyzed by inertia.

Continued on page 214

The inaugural ceremony had a special personal touch to Dr. Hahn, with the music of a flautist friend, Jean H. Ellis, MD, accompanied on the piano by a cousin, Jewell Bowman.

Continued from page 213

As my colleagues and I come to office, we must necessarily take an awareness inventory:

1. I am aware that the importance of my being your organizational leader is already grossly exaggerated by our very presence here tonight;
2. I am aware that collectively, we are but one of many vectors of force that will define the health care system of the future;
3. I am aware that, try as I may, each decision I have the option to make will only please a portion of our collective membership;
4. I am aware that the idealism which each of us tendered when we took the Hippocratic Oath has been tarnished and is at risk of being further tarnished by the external and internal forces mentioned previously;
5. I am aware that the majority of our medical peers are minimally tuned to the plight of our organization, many are totally disinterested and nearly 50% do not bother becoming members;

I enjoy quoting Ella Wheeler Wilcox's poem, "Two Kinds of People." She said:

There are two kinds of people on earth today,
Just two kinds of people, no more, I say,
Not the good and the bad, for 'tis well understood
The good are half bad and the bad are half good.

Not the happy and sad, for the swift flying years
Bring each man his laughter and each man his tears.
Not the rich and the poor, for to count a man's wealth
You must first know the state of his conscience and health.

Not the humble and proud, for in life's busy span
Who puts on vain airs is not counted a man.
No! The two kinds of people on earth I mean
Are the people who lift, and the people who lean.

Wherever you go you will find the world's masses
Are ever divided in just these two classes.
And, strangely enough, you will find, too, I wean,
There is only one lifter to twenty who lean.

This one question I ask. Are you easing the load
Of overtaxed lifters who toil down the road?
Or are you a leaner who lets others bear
Your portion of worry and labor and care?

6. I am aware that nearly all that I accomplish this next year will be due to the loyal support and guidance from the members of the Council, the MSMA staff, my partner Dr. Walls, and staff who support me in the office, my wife Marge and family who support me at home and that one MSMA member in every 20 who is a lifter.

It seems to me that at this juncture in the history of health care in the United States and more specifically the history of health care in Missouri, there are two major arenas of battle. The first is the forms or formats under which we shall practice. The second is the relationship which we shall maintain with our patients.

In my "locked in" state and in your "locked in" state, what are we going to do about health care?

With the renewed hope which Judy has received from her new computer device, she has applied to a special program at Drake University where she hopes to finish her master's degree in special education counseling. Through a modem to her computer this just may be possible.

Judy has one of those moving book holders that allows her to read handily. She reads incessantly and rarely watches TV saying, "It is a waste of time." She writes letters and poems and has entered some of these poems in contests.

Recently, a group of eighth and ninth grade kids from a local St. Mary's parish asked to come and visit her. At first she indicated that she did not wish to be on display, and secondly, these were not the kids from her local Protestant church which have been so supportive to her family. Then she thought better of the idea and said, "OK."

After the kids had their fill of questions and answers from Judy and her mother, Judy moved her eyes rapidly from side to side which indicates that she has something to say. Then in her conventional eye blink communication, she said, "Learn everything you can. When you think you are alone, God is there. No one loves you like your own family. You can take much more than you think you can."

What would Judy say if she were to give us some guidance about where we should expend our professional and organizational energies?

Perhaps she would say, "Go to your churches, your parishes, your synagogues, your mosques and your temples. Listen to that still small voice that represents the peace that passes understanding. Find those common threads woven through humanity which make us one. Then with your heads and your hearts set right, proceed to fulfill the Oath of your profession and mission of your organization."

We must exert those energies and skills which we possess to guide our legislatures toward a system which will give the best health care we can provide for the people of Missouri. We must resist all lesser motivations which detract from our profession and the care which we give those whom we serve.

Will we be successful? That depends on what we consider "success." Both Ralph Waldo Emerson and Mrs. A. J. Stanley are credited with these words which define success in terms of big attitudes and little acts: "To laugh often and much; to win the respect of intelligent people and the affection of children; to earn the appreciation of honest critics and endure the betrayal of false friends; to appreciate beauty, to find the best in others; to leave the world a bit better, whether by healthy child, a garden patch, or redeemed social condition; to know even one life has breathed easier because you have lived. This is to have succeeded."

It is my humble pleasure to serve you, a host of successful physicians in the Missouri State Medical Association and to the rest of you who are equally successful residents of the State of Missouri.

Physician Leadership: Developing a Physician-Directed, Community-Based Managed Care Network

Tom Bennett, Executive Vice President, MSMS, Inc. and
Lewis Vollmar, MD, MBA, MA

Managed Care Is Here To Stay

"The reason I moved out of the big city was to get away from managed care and all that it signifies. Lo and behold, Humana is now on my doorstep yet again. Where else can I run?"

These are the actual words of a young physician from a small central Missouri town expressed with deep frustration, anger, and anxiety concerning the rapid encroachment of managed care into his professional life. The main message of this anecdote is . . . you can run but you cannot hide from managed care. Managed care is here to stay.

The upward spiraling cost of health care delivery is the factor forcing the change. The U.S.A. spent $884.2 billion on health care in 1993, and an estimated $946 billion or 14 percent of the GDP was spent in 1994. (1) The current method being used to rein in this increasing expense is managed care, when in actuality it is "managed cost," not managed care. Managed care plans enrolled more than 52 million people in 1994, including 1.1 million in Missouri. (2) With the Medicaid waiver in effect, one-third of Missouri's populace will become eligible for managed care.

In another desperate effort to control costs, a rapid movement is rolling to move medical services from hospitals to community-based health centers. According to Paul Ellwood, MD, the guru of managed care,"It is possible to do almost everything outside the hospital." (3) As managed care penetrates deeper into communities, it is causing more unoccupied beds appearing in hospital systems. Hospitals' traditional business was to fill beds; under managed care, they are emptying beds. Question: What is the hospitals' role in 5-10 years?

Physicians have a golden opportunity of controlling the new wave of community-based health care delivery as hospitals ponder excess capacity and a decreasing service need. Hospitals, managed care organizations, and insurance companies are spending untold millions to control this wave. Their strategy: purchase physician practices, thus controlling contracts and associated ancillary revenue streams.

Note Bene: Physicians are the core providers and the very foundation of health care delivery! Only through physicians can these controlling institutions generate revenue.

Physician-Directed Community-Based Networks

How do physicians position themselves for the future? Some choices may be: to do nothing and hope that managed care goes away; to negotiate the best deal possible and sell out; to integrate with other physicians by forming POs, IPAs, specialty groups or multispecialty groups; or to integrate by forming physician-directed, community-based managed care networks.

Missouri State Medical Services, Inc. is responding to the opportunities community-based care is offering physicians. For the last 12 months, MSMS has been advocating the formation of local, regionally-designed, comprehensive, integrated physician networks, providing full services through geographically-placed, one-stop, community centers of care. The proposed network model is not a loose confederation or IPA, but a tightly integrated association causing physicians to be professionally and economically integrated. Physicians will govern the selected membership using strict clinical standard peer review processes. *Primary Care Physicians*, complemented by organized specialty care groups and other ancillary providers, will be the core of the networks. Services will be marketed to managed care organizations, insurance companies, and eventually to businesses wishing to enter fixed budget and full risk contracts.

Scope of Services: (Please refer to diagram.)

Because Decisions Are Made Here...

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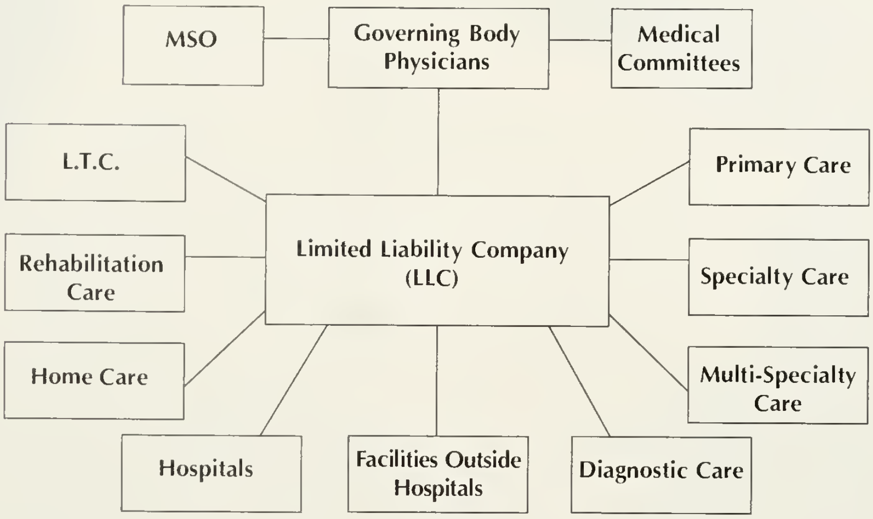
PHYSICIAN-DIRECTED - COMMUNITY BASED MODEL OF HEALTH CARE



The Physician-Directed Networks will provide a comprehensive range of services including:

- Primary care: family practice, internal medicine, OB/GYN, dermatology, and pediatrics
- Medical specialty care
- Surgical specialty care
- Radiology, pathology, anesthesia and radiation-oncology specialty care
- Home care
- Hospice care
- Rehabilitation services provided at community-based facilities or work sites
- Outside hospital care: surgicenters, sub-acute centers, urgent care centers and long-term care centers
- Hospital services

Model Characteristics:

- Patient-focused and centered;
- Physician-directed;
- Private practice of medicine is preserved;
- Patient-physician relationship is preserved;
- Physician-owned and equity-based;
- Community-based rather than hospital-based;
- Full range of services provided;
- Fully responsible and accountable physicians manage patient care;
- Geographically-advantaged for patient convenience;
- Professional, ancillary and hospital service risks are assumed by physicians;
- Financial and professional management of contract responsibility falls to physicians;
- Physicians are judged by outcomes, results, and satisfaction;
- A *medical* model rather than an economic model enforced;
- Management information systems support clinical and operational infrastructures;
- An elected, paid physician CEO and paid medical director lead the network;
- *Case management* method replaces the gatekeeper model;
- Multispecialty community centers of care evolve from the network;
- Comprehensive care system allows full attention to the patient;
- *Value* is the emphasis to purchasers and patients;
- The Management Service Organization is the corporate or management vehicle;
- Over time, effectiveness of care is evaluated through scientific methods;
- The Limited Liability Company (LLC) is the legal vehicle.

Limited Liability Company

The Limited Liability Company (LLC) is the legal vehicle proposed for the model. The LLC is a two-year-old statuary model that is a hybrid between a business corporation and a partnership.

Characteristics of the LLC include:

- Offers protection from third party liability similar to a business corporation;
- Offers tax treatment similar to a partnership, i.e., avoids double taxation;
- Offers greater future growth flexibility;
- The LLC, physicians, and corporations will contract to provide clinical services;
- Only physicians may be members (shareholders) of the LLC;
- Medical service contracts are property of the LLC;
- Information system data belong to the LLC;
- The LLC may choose to hire non-physician personnel;
- Physicians, corporations, and partnerships may transfer assets to the LLC;

Continued on page 218

Continued from page 217

- Existing corporations/partnerships do not have to dissolve; can be members of LLC.

LLC Range of Services, (but not limited to):

- Contracted medical services;
- Ancillary services;
- Contract negotiations and contract management;
- Marketing and promotions;
- Medical management information systems: computerized billing and collections, claims processing and administration, electronic patient records, clinical data bases, data interchange;
- Operations management: staffing non-physician personnel, human resource/personnel management, payroll administration, finance and accounting services, benefits administration;
- Facilities and clinical management;
- Utilization review;
- Development and implementation of clinical standards and guidelines;
- Case management;
- Outcomes management;
- OSHA, CLIA, and infection control compliance;
- Development and implementation of nursing standards and protocols;
- Group purchasing: professional liability, health, dental, life and disability insurance, office supplies/furniture, medical supplies;
- Credentialing;
- Physician recruitment and network development.

Management Service Organization

The Management Service Organization (MSO), the business vehicle driving this model, provides high level management, technical and executive services. The MSO's purpose is to bring to the LLC the capital and resources necessary to build the operational, clinical, and informational infrastructures to compete effectively and efficiently with hospitals, managed care organizations and insurance companies.

Although responsible for the services listed above, the physician-owned and operated LLC can be contracted through an MSO. Physicians may also become shareholders of the MSO. The MSO is funded by fees levied against LLC members for contracted services.

MSO Core Services:

- Billing and collections
- Managed care contracting, negotiations, and administration
- Operations management: personnel management, payroll, benefits administration, financial and accounting services
- Medical information systems
- Marketing and promotions

Capital Partners

To establish this model of care, physician groups should aggressively seek capital partners--ones involved in the provision of related health care services. The partners could consist of a home care agency, rehabilitation company, an insurance company, a managed care organization, a pharmaceutical company or other related business entity with sufficient capital resources.

Increased market share for their own services through a physician network is the capital partner's benefit. It would also benefit ancillary providers who may otherwise be locked out of the market by hospitals and managed care organizations, which for economic reasons decide to utilize their own in-house services. Forming a physician network as rapidly as possible would provide a legitimate form of competition to the hospital networks.

Key Ingredients

The key ingredients for the success of these physician-directed networks include:

- A core of dedicated, committed physicians sharing the vision of physician-directed, community-based health care;
- The uses of high-level executive management and technical support that can implement, maintain and grow with these networks;
- The formation of efficient operational infrastructures and high level clinical infrastructures, i.e., clinical standards and guidelines;
- Information systems to support the operational and clinical infrastructures;
- A legal vehicle meeting the constraints of antitrust and Stark legislation;
- Conveniently placed geographic community centers of care;
- Capital, Capital, Capital!;
- The *Physician Leader* who has the vision, charisma, skill and stamina to actualize the concept.

Of all factors necessary to bring this model of physician-directed net-

Continued on page 220

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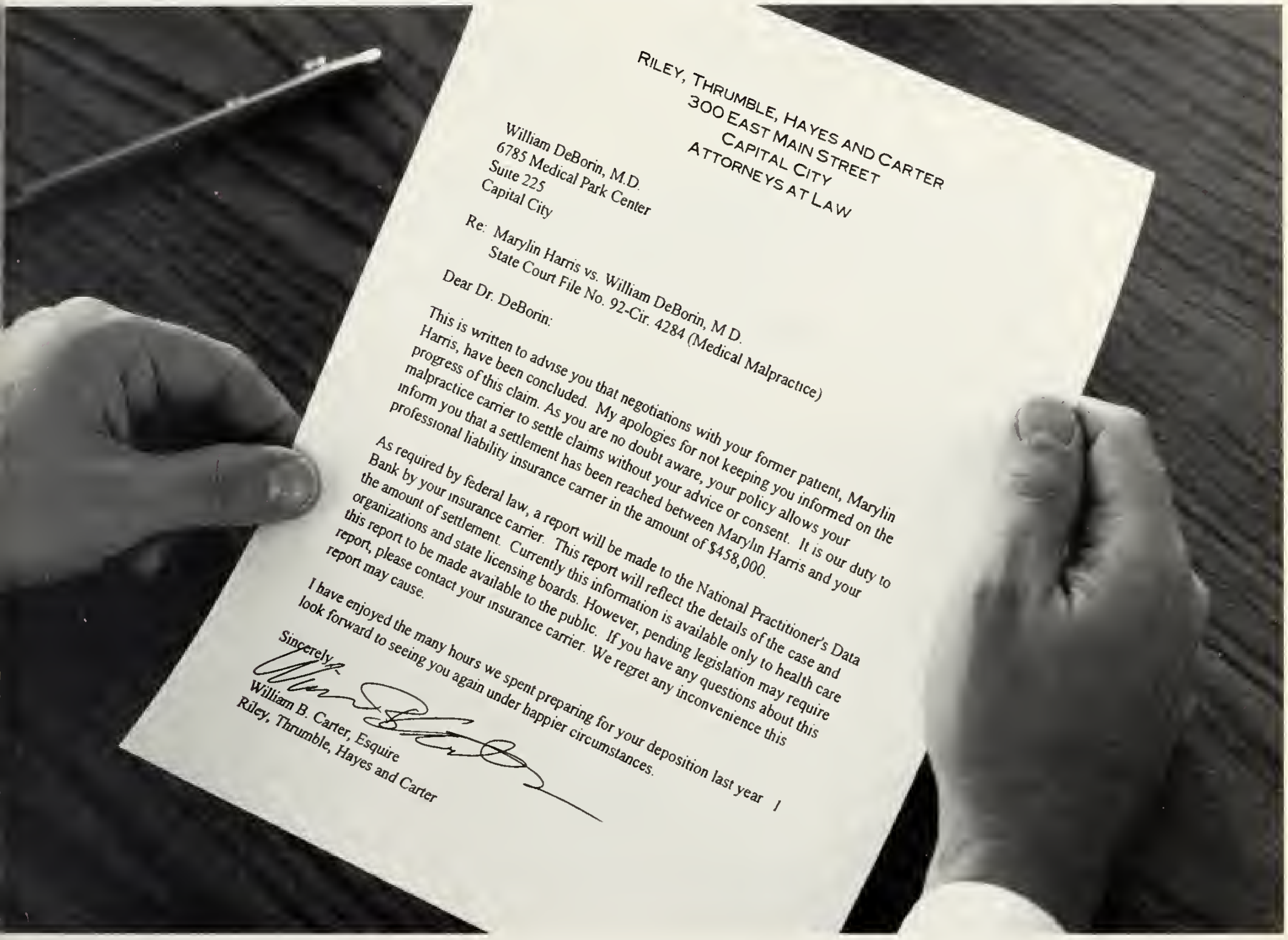

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300 EAST MAIN STREET
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William DeBorin, M.D.
6785 Medical Park Center
Suite 225
Capital City

Re: Marylin Harris vs. William DeBorin, M D.
State Court File No. 92-Cir. 4284 (Medical Malpractice)

Dear Dr. DeBorin:

This is written to advise you that negotiations with your former patient, Marylin Harris, have been concluded. My apologies for not keeping you informed on the progress of this claim. As you are no doubt aware, your policy allows your malpractice carrier to settle claims without your advice or consent. It is our duty to inform you that a settlement has been reached between Marylin Harris and your professional liability insurance carrier in the amount of $458,000.

As required by federal law, a report will be made to the National Practitioner's Data Bank by your insurance carrier. This report will reflect the details of the case and the amount of settlement. Currently this information is available only to health care organizations and state licensing boards. However, pending legislation may require this report to be made available to the public. If you have any questions about this report, please contact your insurance carrier. We regret any inconvenience this report may cause.

I have enjoyed the many hours we spent preparing for your deposition last year I look forward to seeing you again under happier circumstances.

Sincerely,

William B. Carter, Esquire
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Continued from page 218

works to fruition, none is more vital than the *Physician Leader*. The entire time-consuming and complex process of integration is contingent on the skills, courage, conviction and commitment of the *Physician Leader*.

A leader by definition is an innovator. The leader does things others have not yet done or do not know how to do. The leader accomplishes before others. The leader makes dreams a reality. It is encouraging to know there are young physician leaders throughout the state who are committed to this physician-directed model of care.

"All men dream; but not equally.
Those who dream by night in the dusty
recesses of their minds
Awake to find that it was vanity;
But dreamers of day are dangerous men,
That they may act their dreams with open
eyes to make it possible."

-T.E. Lawrence

Acknowledgement

I wish to thank Lizabeth Starnes for her help with this paper.

References

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2. Marion Merrell Dow. *Managed Care Digest*, 1993 and 1994.
3. Ellwood, PM. Reforming Healthcare from Jackson Hole. *Healthcare Financial Management*, p. 27 Nov. 1994.

Recommended Reading: *A Guide to Forming Physician-Directed Managed Care Networks*, AMA, Chicago, 1994.

For futher information contact Tom Bennett at Missouri State Medical Services, Inc., by calling 1-800-633-1516 or 314-842-4722.

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Managed Care Plus (MC+): The Wave of the Future for Missouri Medicaid?

Edward R. Jenkins, MD

St. Patrick's Day 1995, may ultimately be viewed as the beginning of a better Medicaid program for the poor of the State of Missouri, or it may come to be seen as another clumsy bureaucratic boondoggle.

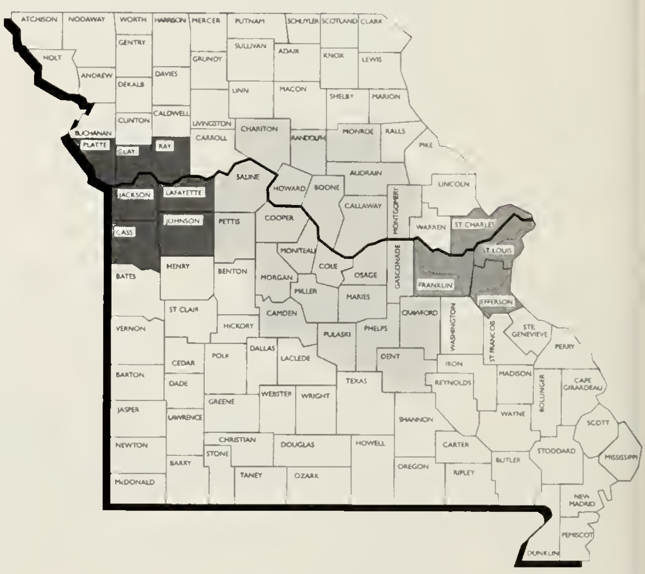
On March 17th, Director of Medicaid Donna Checkett presented the administration's Medicaid Managed Care program. The current Medicaid budget for Missouri is $2.5 billion, which is 25% of the state's overall budget and 50% of all new revenue. The program's budget for 1996 is estimated to be $2.6 billion. The current population of recipients receiving care is 600,000 to 750,000 Missourians (1 out of 9 residents). Half of this population is children.

The new managed care program will be implemented in stages with the first group of Medicaid eligible patients beginning managed care during 1995, 1996 and 1997. This group will consist of AFDC recipients, children in poverty and pregnant women. Ms. Checkett explained, "The group constitutes 70% of the Medicaid population and represents 30% of the total cost of Missouri Medicaid. The elderly, the disabled, the Medicare/Medicaid eligible and individuals residing in nursing homes and intermediate care facilities are the balance of the Medicaid population which will enter managed care after 1997. They represent 70% of the total cost of the program, but only 30% of the population."

There are three managed care areas included in the program's staged implementation. Mid-Missouri Managed Care area is the corridor lying on both sides of Interstate 70 between the Kansas City-St. Joseph area and the St. Louis area (*See map*). It is estimated that there will be 145,745 eligible recipients in the St. Louis area; 40,773 recipients in the Mid-Missouri area; and, 79,680 recipients in the Kansas City area.

The implementation schedule is ambitious. Bids were submitted in the St. Louis Managed Care area on March 3. Contracts were awarded to the following bid winners: GenCare, Humana, Health Care USA, Mercy (a.k.a. Unity), Alliance for Community Health, Partners, and Prudential. Enrollment will proceed from May to July 1995 and implementation in St. Louis is to occur by August 1, 1995.

Medicaid Managed Care I-70 Corridor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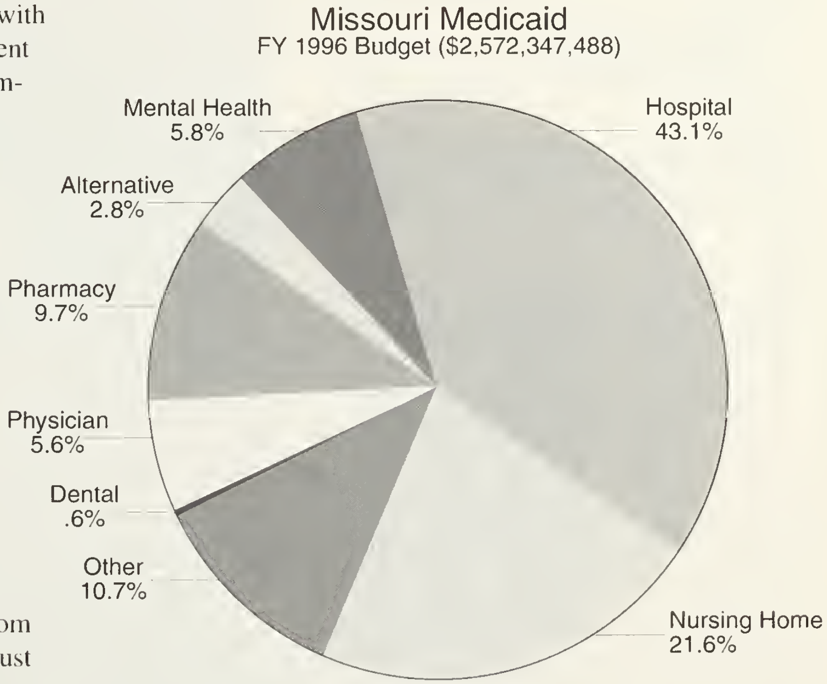
Concurrently, pre-bidding contract awarding and enrollment will occur in the Mid-Missouri managed care area. Pre-bidding is tenatively scheduled to begin in Mid-Missouri in late May. Bids are due on July 15 and the contract is to be awarded on September 1, 1995. Enrollment begins October 1, 1995, with implementation scheduled for January 1, 1996. Kansas City area contract bidding has been delayed.

The second phase will implement a schedule requiring enrollment of the remainder of Medicaid recipients throughout Missouri by January 1, 1997.

A Quality Assurance Program has been established in the bidding process. It will include an Ombudsman program, outcome based measurements, and provider accountability. It will also include internal and external reviews and audits, assurance that compliance with quality standards is maintained and establishment of a Quality Assurance Advisory Board, presumably to include one or more physicians.

Each service area must have two or more Managed Care plans available to recipients to give them the opportunity to use an alternate plan of care should they desire.

A standard benefit package is planned for the first group of Medicaid enrollees. It will include: Inpatient Hospital Care, Inpatient and Outpatient Behavioral Health, Outpatient Hospital Care, Physician, Nurse, Midwife, Certified Nurse Practitioner care, lab and x-ray benefits, Home Health Care for those over 21 years of age, Family Planning, Pharmacy, Ambulance, Durable Medical Equipment, Podiatry and Hospice services. Medically necessary transportation from the patient's residence to the point of service must also be provided by the Managed Care entity.



This chart was generated using the department's core budget request which approximates the fiscal year (FY)1995 Medicaid program.

Children's benefits will be all inclusive, providing all medically necessary services; speech therapy, occupational therapy, physical therapy, psychologist counselors, and social workers for behavioral therapy, private duty nursing, case management and dental care.

The Department of Social Services plans a number of consumer protection clauses in each contract. Contracts will require open enrollment annually and the right to a fair hearing and grievance proceedings for the Medicaid recipient. Member requests to change plans or to change doctors are to be monitored and a consumer guidebook will be published.

Health plans must provide service during regular business hours to assist recipients in choosing primary care providers, to provide information on recipients' and providers' rights and responsibilities, and to answer questions in processing complaints. A toll-free number which is accessible to visually and hearing impaired recipients must be maintained by each health plan.

Routine appointments for primary and specialist care will be permitted 30-day scheduling with a 2-hour average wait. Urgent care will require the recipient to be seen within two days. Emergency services will be provided immediately. Maternity care will require that recipients in their first and second trimester be seen within 7 days and recipients in their third trimester be seen within 3 days.

A permanent ID card will be provided to each Medicaid recipient in August 1995. These will replace the present monthly paper ID cards. An expiration date is not indicated. Therefore, providers will need to verify eligibility prior to providing services. Each card will contain a magnetic strip containing the recipient's Medicaid number which can be read by point of service card swipe readers. Additionally, each Medicaid recipient will have a member ID card from his or her Managed Care Plan.

An ambitious community education campaign using print media, video, radio, mailing, and public speakers has been proposed. The campaign will use a neighborhood-based network of supporters and speakers. County work groups and steering committees composed of community activists and leaders, consumers, and local health departments are planned.

Ranked Medicaid Contracts Awarded to the St. Louis Area

1. **GenCare Health Systems**
2. **Humana Health Plan**
3. **HealthCare USA-MO (Florida Medicaid HMO new to Missouri along with St. Louis Regional Hospital.)**
4. **Mercy Health Plans, a.k.a. Unity (St. Anthony's, St. John's & St. Luke's)**
5. **Alliance for Community Health which consists of: Mound City Medical, Deaconess, Cardinal Glennon Children's Hospital, and 3 community health centers - St. Louis Comprehensive Health Center, Family Care Health Centers, and People's Health Centers)**
6. **Partners HMO (Barnes-Jewish-Christain)**
7. **Prudential Health Plan**

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Otolaryngology Quiz #4

by Robert P. Zitsch, III, MD
Division of Otolaryngology, University of Missouri - Columbia

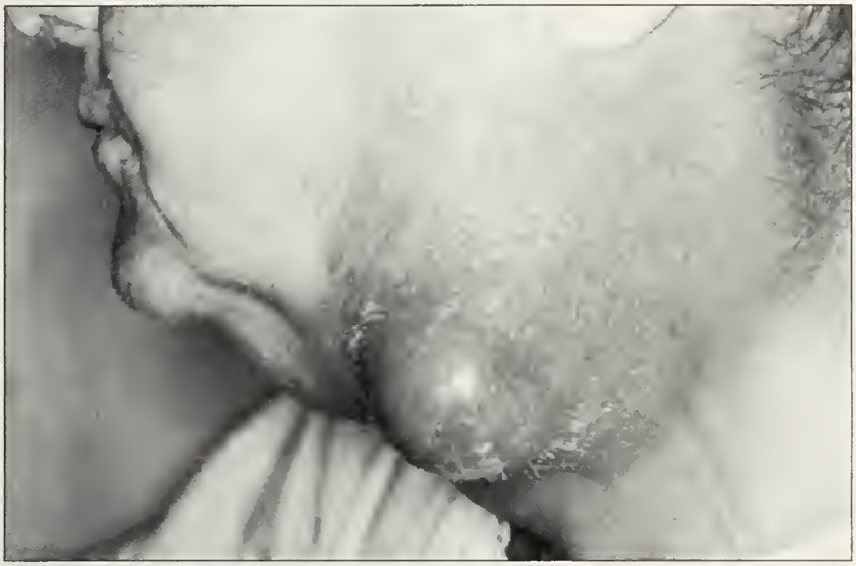

Figure 1

A 64-year-old man presented with the primary complaint of a left-sided, upper cervical mass, which had been noted for the past six weeks. Recently, the mass became tender and erythematous. He admitted to heavy alcohol use and smokes two packs of cigarettes per day. The physical examination discloses the singular finding of the neck mass shown in Figure 1. Examination of the upper aerodigestive tract is normal.

What is the most likely diagnosis responsible for this cervical mass?

a. Cervical actinomycosis.
b. Submandibular gland infection.
c. Deep neck abscess.
d. Metastatic carcinoma.
e. Atypical mycobacterial lymphadenopathy.

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER: d. Metastatic carcinoma.

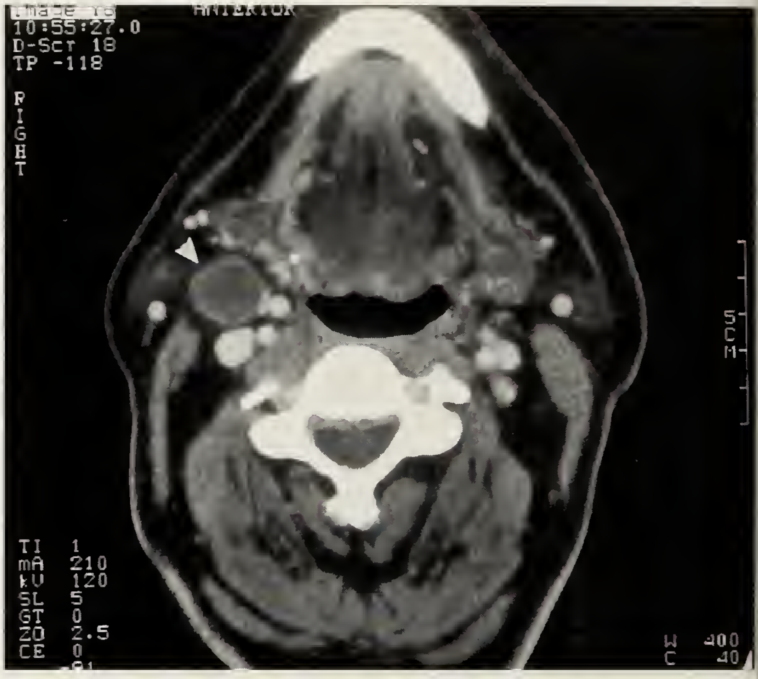

Figure 2. Axial CT scan at the level of the mandibular symphysis showing lymph node metastasis (arrowhead) from a head and neck squamous cell carcinoma.

Malignancies arising in the head and neck region commonly present as metastatic cervical lymphadenopathy. The types that will most frequently manifest in this manner are carcinomas arising from the mucosal surfaces of the nasal cavity, paranasal sinuses, oral cavity, pharynx, larynx, and cervical esophagus, carcinomas arising in the thyroid gland and carcinomas arising the salivary glands. In addition, new or recurrent cutaneous malignancies of the head and neck region such as squamous cell carcinomas and melanomas may also present in this manner. Only rarely will malignancies arising outside of the had and neck region present as a cervical mass.

Most cases of isolated neck masses in adults are found to be malignant, whereas in the pediatric population, they are benign. A differential diagnosis should include metastatic lymphadenopathy, lymphadenitis, congenial cysts and salivary gland lesions. The evaluation should begin with a complete history to elicit any signs or symptoms of a malignancy the head and neck region such as voice change, dysphagia, odynophagia, stridor, weight loss or ear pain. The physical examination must thoroughly evaluate the mucosal surfaces of the upper aerodigestive tract, including the nasopharynx, hypopharynx and larynx. Any suspicious lesion should be biopsied. The neck must be carefully palpated to discover any enlarged cervical lymph nodes, thyroid nodules or salivary gland masses.

Metastatic cervical lymphadenopathy can involve one or multiple lymph nodes. In most cases, the lymph node is firm, non-tender, mobile and larger than one centimeter. Rarely, though, a lymph node metastasis may undergo central necrosis forming a partially cystic, erythematous, and tender neck mass. This type of manifestation of a lymph node metastasis will often be misdiagnosed as a simple neck abscess.

The diagnostic workup may include an imaging study such as CT or MRI if there is a need to clarify the anatomic relationships of the neck mass to the deep cervical structures or if the physical examination is inadequate for satisfactory evaluation of the cervical lymph nodes, as may occur in patients with thick necks (Fig 2). Fine needle aspiration biopsy, a technique which can be used to obtain material for cytologic evaluation or culture, should be used to assist in the diagnosis of most cases of adult neck masses. An open surgical biopsy to establish the diagnosis should be avoided if at all possible, since it can adversely affect survival of the patients with metastatic carcinoma.

References

1. Moloy PJ. How to (and How Not To) Manage a Patient With a Lump in the Neck. In: Common Problems of the Head and Neck Region, pp. 129-140. Philadelphia, W. B. Saunders Co., 1992.

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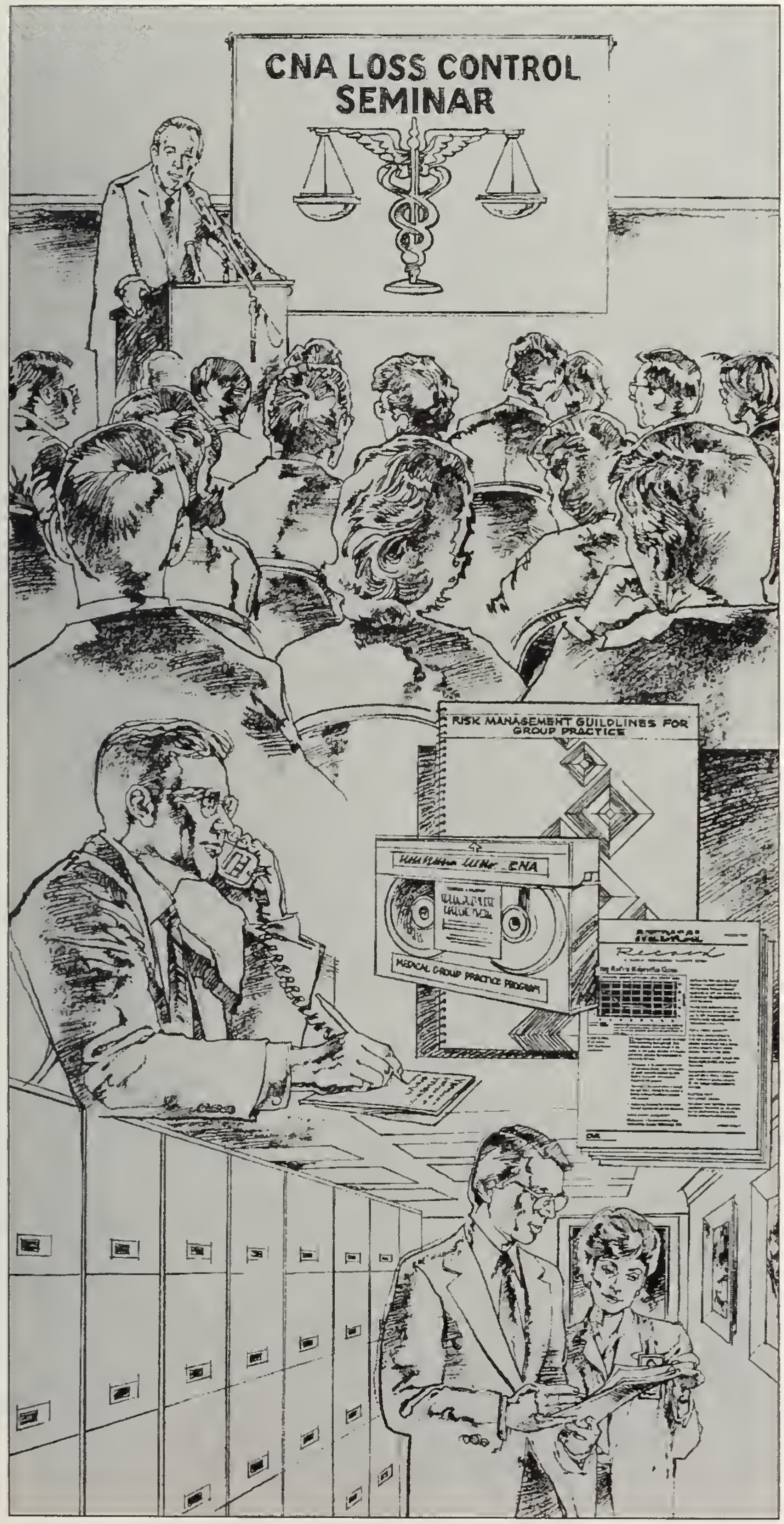
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James G. Blythe, MD

James G. Blythe, MD, FACS, FACOG, Chairman of Obstetrics and Gynecology and Chief of Gynecologic Oncology at St. John's Mercy Medical Center, St. Louis, was chosen President-elect of the Society of Gynecologic Surgeons (SGS) at its 21st annual March meeting in Orlando, Florida.

The Truman Medical Center Charitable Foundation received a grant from the Susan G. Komen Breast Cancer Foundation for the hospital's Breast Cancer Education and Screening Program. The grant was awarded through Kansas City Race for the Cure program.

Loretta Loftus, MD, assistant dean and chairperson of the Council of Evaluation and professor of medicine at the University of Missouri-Kansas City School of Medicine, will lead TMC in a year-long project to educate minority and financially disadvantaged women about breast cancer; to teach women to do breast self-exams; and to provide women with accessible physical examinations and mammograms. Patients will be chosen through a screening process at TMC and its allied health facilities. If the program proves successful, Dr. Loftus hopes to make it a permanent part of all women patients health care examinations.

Luciann Hruza, MD, instructor of medicine in the Division of Dermatology at Washington University School of Medicine is the principal investigator in a acne study. The treatment combines the use of light therapy and topical medication to shrink the oil-producing glands where acne begins. Volunteers over the age of 18 with acne on their back or chest who are not taking oral medications are needed for the study. For more information call (314)434-1991.

Dennis W. Choi, MD, PhD, Andrew G. and Gretchen P. Jones Professor of Neurology and Head Neurology and Neurological Surgery, received a five-year grant from the National Institute of Neurological Disorders and Stroke for a research project titled, "Cell-Cell Interaction and Hypoxic Brain Injury."

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The following physicians have completed 150 hours of continuing medical education within a three-year period. Sixty of the credit hours are earned in Category I programs.

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Minutes of the Annual Meeting

FIRST SESSION

The first session of the MSMA House of Delegates was called to order at 10 a.m., Thursday, March 23, 1995 by Speaker of the House James Wolfe, Jr., MD. The following officers and delegates were present at the 137th Annual Meeting:

Officers

President	H. Jerry Murrell, MD
President-elect	Frederick Hahn, MD
Past President	Melvin Kasten, MD
Vice President	Kenneth Rall, MD
Vice President	Harold Lurie, MD
Vice President	Charles Norland, MD
Secretary	Norman Knowlton, MD
Treasurer	David Wilkinson, MD
Speaker	James Wolfe, MD
Vice Speaker	Frederick DeFeo, MD

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ASSOCIATION
Dr. Ryall

Parliamentarian Jo-Ellyn Ryall, MD, discussing procedure with Speaker of the House James Wolfe, MD.

Councilors

District 1
Stephen Vilmer, MD
District 2
Carl R. Kruse, MD
District 3
Gordon Goldman, MD
Robert Miller, MD
Arturo Montes, MD
Daniel O'Sullivan, MD
Meredith Payne, MD
District 4
Sam Farrell, MD
District 5
Jerry D. Kennett, MD
Robert Wankum, MD
District 6
A. J. Campbell, MD
District 7
Robert Gibbons, Jr., MD
William Dorzab, MD
Linda Dorzab, MD
Steven Buie, MD
District 8
Duane Hellam, MD
District 9
David Barbe, MD
District 10
William C. Shell, MD
Hospital Medical Staff
Charles Barbee, MD
Resident Physicians
Robert Swanson, MD
Student Section
Sarah Vogel

Vice Councilors

District 1
Robert Schaaf, MD
District 2
Lent Johnson, MD
District 3
Newton White, MD
District 4
Jeffrey Copeland, MD
District 5
Joseph Corrado, MD
District 6
Jerry Meyer, MD
District 7
Larry Rues, MD
District 8
Clarence Martin, MD
District 9
Ed Jenkins, MD
District 10
Mark Kasten, MD
Hospital Medical Staff
Luis Anglo, MD
Student Section
Robert Puchalski

AMA Delegates

Robert Gibbons, Jr., MD
William Huffaker, MD
Melvin Kasten, MD
Jack Kayes, MD
Jo-Ellyn Ryall, MD
Hugh Stephenson, MD

AMA Alternate Delegates

David Barbe, MD
Jonathan Dehner, MD
H. Peter Ekern, MD
Arthur Gale, MD
Larry Rues, MD
Carl Strauss, MD

House of Delegates

District 1
Buchanan
James Conant, MD
Robert Schaaf, MD
Grand River
John R. Dixon, MD
Clay-Platte
Donald Fakhoury, MD
Stephen McCray, MD
Alternate Delegates
Clay-Platte
Gary Carter, MD

District 2
Northeast
Sandra Ahlum, MD
Lent Johnson, MD
Alternate Delegates
Northeast
Michael Bukstein, MD

District 3
St. Louis Metropolitan
Donald Arnold, MD
Vernon Balster, MD
Arjun Bhattacharya, MD
George Bohigian, MD
Arnold Brody, MD
Edmond Cabbabe, MD
Octavio Chirino, MD
Harry Cole, MD
Patrick Coyne, MD
James Criscione, Jr., MD
Jonathan Dehner, MD
James Diestelhorst, MD
John Donovan, Jr., MD
John Eisenbeis, MD
Daniel Fabito, MD
Herbert Ferrari, MD
Linda Fisher, MD
Arthur Gale, MD
Lance Gerowin, MD
Richard Gimpelson, MD
Godofredo Herzog, MD

John Holds, MD
George Hruza, MD
William Huffaker, MD
Donald Ingram, MD
Timothy Jones, MD
Robert Karsh, MD
Jack Kayes, MD
Jeffrey Kirsch, MD
G. Robert Kletzker, MD
Russell Kraeger, MD
Bruce Kraemer, MD
John Laird, MD
William Leightner, MD
rancis Lieb, MD
Herluf Lund, Jr., MD
Allan McCown, MD
K. Lynne Moritz, MD
J. Gail Neely, MD
Charles Norland, MD
Edward O'Brien, Jr., MD
David Perkins, MD
Frederick Peterson, MD
James Redington, MD
Thomas Reh, MD
John Rollo, MD
Jo-Ellyn Ryall, MD
Stephen Slocum, MD
Kenneth Smith, Jr., MD
John Stith, MD
J. Regan Thomas, MD
Randall Treadwell, MD
Harvey Walker, Jr., MD
Bruce Walz, MD
Joseph West, MD
Martin Wice, MD
David Wilkinson, MD
Carol Williams, MD
William Wright, MD
Kenneth Zehnder, MD
J. Micheal Zylka, MD

Alternate Delegates
St. Louis Metropolitan
Luis Anglo, MD
Grant Bever, MD
Christine Cernik, MD
Mario Coronado, MD
Ananda DeSilva, MD
Harry Eggleston, MD
Farida Farzana, MD
Charles Miller, MD
Robert Onder, MD
David Reisler, MD
Shiraz Sunderji, MD
Newton White, MD

District 4
St. Charles-Lincoln
Jeffrey Copeland, MD
Dennis Keesal, MD

District 5
Audrain
Nancy Bunge, MD
Glenn Gordon, MD
Boone
Jag Devkota, MD
James Roller, MD
Dennis Knudson, MD
Ted Groshong, MD
Maarten Nieuwenhuizen, MD
William Allen, MD
Hugh Stephenson, MD
Kenneth Rall, MD
Robert Thomas, MD
William Crowley, Jr., MD
Cole
George Carr, MD
James Allan, MD
Alan Braun, MD
Harold Kanagawa, MD
Lake of the Ozarks
Richard Heimburger, MD
Roger Francis, MD
Carl Petit, MD
Alternate Delegates
Boone
Dorothy Rodgers, MD

District 6
Henry
C. R. Wetzel, MD
Lafayette-Ray
Jerry Meyer, MD
Pettis
Phillip Hornbostel, MD
West Central
Warren Lovinger, MD
Ted Moore, MD

District 7
Metro Med of K. C.
Thomas Allen, MD
Jennifer Ashby, MD
Joseph Bizek, MD
William Bradshaw, MD
Barbara Buchanan, MD
Alfred Caruso, MD
William Case, MD
Michael Caughron, MD
Jean Ellis, MD
Deborah Jantsch, MD
Pierre Keitges, MD
Gregg Laiben, MD
Andrew McCanse, MD
Wallace McKee, MD
Richard Michelson, MD
Carl Myers, MD
Richard Nelson, MD
Gale Oleson, MD
J. Chris Perryman, MD
Harry Revels, III, MD
Larry Rues, MD
Carl Siegel, MD
Donald Stillie, DO
Carl Strauss, MD
Marc Taormina, MD
Nalini Tella, MD

District 8
Greene
Michael Clarke, MD
Karel deLeeuw, MD
Darrell Domann, MD
Charles H'Doubler, MD
Michael Hoeman, MD
Norman Knowlton, MD
Keith LaFerriere, MD
Harold Lurie, MD
Stanley Peterson, MD
Arteso Raborar, MD
James Rogers, MD
James Schaeffer, MD
Ramon Shane, MD
Diana Spade, MD
Dan Sullivan, MD
Norman Wall, MD
Arlen Winsky, MD
Robert Zahn, MD
Jasper
Jeffrey Greenberg, MD
Jeff Jones, MD
Thomas Macdonnell, MD
Clarence Martin, MD
Ira Joe Pryor, MD
Howard Roberts, MD
Duane Sherrod, MD
Alternate Delegates
Greene
Kenneth Pottenger, MD
Catherine Schane, MD
Joni Scott, MD

District 9
Mid-Missouri
Barry Bass, MD
Ed Jenkins, MD
Candice Moore, MD
South Central
Laureano Mayuga, MD
C. Frank Smith, MD
Alternate Delegates
South Central
Joe Wall, MD

District 10
Butler-Wayne-Ripley-Carter
Gene Leroux, MD
Cape Girardean Area
Jean Chapman, MD
Theodore Glenn, MD
Mark Kasten, MD
Edwin Masters, MD
Scot Pringle, MD
Thomas Sparkman, MD
Gregory Tobin, MD
Jefferson
Alfred Shaplin, MD
Mineral Area
J. David Auner, MD
John Fitz, MD
Perry-Ste. Genevieve
Job Pontillas, MD
SEMO
Kenneth Dempsey, MD
Kenneth Stone, MD

Continued on page 232

P. John Seward, MD, Chair of the AMA Board of Trustees served as honored guest at the 137th Annual Meeting.

Continued from page 231

Alternate Delegates
Butler-Wayne-Ripley-Carter
Ann Peick, MD
Kirby Turner, MD
Perry-Ste. Genevieve
Jose Gonzales, MD

Delegates-at-Large
Richard Bradley, MD
Lester Bryant, MD
Frederick DeFeo, MD
Gary Dyer, MD
H. Peter Ekern, MD
E. T. Hansbrough, MD
Melvin Kasten, MD
E. A. Stricker, MD
James Wolfe, MD

Resident Physicians Section
Howard Pomeranz, MD
Mary Vest-Mason, MD

Students
Pattye Digthon
Chris Hinrichs
Amir Jalali
Luralie Leonard
Daniel Overduck
Eric Pan
Joseph Poggi
Alternate Delegates
Jon Dyer
Jamie Recasens

The first session of the House of Delegates began with a musical performance and presentation of colors and National Anthem by the University City Senior High School Band. Speaker of the House James B. Wolfe, MD, called the meeting to order. President H. Jerry Murrell, MD, welcomed everyone to St. Louis on behalf of the Third District and thanked Drs. Goldman, White, and Cabbabe for their arrangements for the meeting.

William C. Allen, MD, Chair of the Committee on Credentials reported 10 Officers, 28 Councilors, and 103 Delegates were present. The minutes of the 136th Annual Meeting as published in *Missouri Medicine* in July of 1994 were approved.

Speaker Wolfe announced the members of the reference committees: *Reference Committee A* - Chris Perryman, MD, chair; Paul Stohr, MD; Herluf Lund, MD; James Shaeffer, MD and David Auner, MD. *Reference Committee B* - Christine Cernik, MD, chair, Ted Groshong, MD, Jerry Meyer, MD, Tom Sparkman, MD, and William Case, MD. *Reference Committee C* - Sandra Ahlum, MD, chair, Keith LaFerriere, MD, Allen McCown, MD, Barry Bass, MD, and Alan Braun, MD.

The Speaker called to the Delegates' attention that all late resolutions require a second unless it comes from a society, and that a late resolution will not be referred to a Reference Committee for consideration as business of the House of Delegates unless it is approved by two-thirds of the voting members.

MSMA President H. Jerry Murrell, MD, addressed the House. His remarks appear on pages 244-245 of this issue. President-elect Frederick Hahn, MD, briefly addressed the House.

Alliance President Mrs. Jean Wankum addressed the House. Following Mrs. Wankum's remarks, Dr. Murrell assisted her in distributing the AMA-ERF checks to the four Missouri medical schools. Frederick DeFeo, MD, Assistant Professor of Medicine, accepted the check for the University of Missouri - Kansas City School of Medicine. UMKC received $6,625 in contributions to the Medical Student Assistance Fund, and $1,390 in contributions to the Medical School Excellence Fund. Hugh Stephenson, MD, Professor Emeritus, accepted contributions for the University of Missouri School of Medicine-Columbia. MU received $12,666 for Medical Student Assistance, and $3,881 toward Medical School Excellence. Manuel Comas, MD, accepted the check for St. Louis University which received $16,124 from the Medical Student Assistance Grant, and $5,317 from the Medical School Excellence Fund. Leslie Kahl, MD, Associate Dean of Student Affairs for Washington University School of Medicine, accepted the check for Washington University. Washington University received $8,010 for Medical Student Assistance, and $3,029 in Medical School Excellence Contributions.

Dr. Murrell presented the Citizenship and Community Service Award to Horace Thomas, MD, of Columbia, Missouri, for his high personal standards, integrity, and professional competence. Dr. Thomas also volunteers his time to Habitat for Humanity building houses, to the Columbia Art League and serves on the Board of Directors for the University's Medical School Foundation, a position he has held for over 40 years. In 1988 he recognized the need and donated $10,000 to the University of Missouri School of Medicine with the stipulation that it would be renewed annually if it were used to start a medical ethics program.

MISSOURI STATE MEDICAL ASSOCIATION
Dr. DeFeo
r. Wolfe
MISSOURI STATE MEDICAL ASSOCIATION

Horace E. Thomas, MD, receiving the MSMA Citizenship and Community Service Award for his medical and volunteer efforts.

Dr. Murrell introduced special guest John Seward, MD, chair of the American Medical Association's Board of Trustees. He is a member of the Board's Executive Committee and serves as the delegate to the World Medical Association for the AMA. Dr. Seward is a family physician from Rockford, Illinois. He served as AMA Commissioner to the Joint Commission on Accreditation for Health Care Organizations, and chair of the AMA Technical Advisory Committee on Health System Reform. He has been a delegate to the AMA since 1979, and at one point chaired the Council on Legislation. Dr. Seward received his medical degree in 1965 from the University of Illinois College of Medicine. He is a diplomate of the American Board of Family Practice and a Fellow of the American Academy of Family Physicians.

MISSOURI STATE MEDICAL ASSOCIATION
DeFeo
MISSOURI STATE MEDICAL ASSOCIATION

Manuel Comas, MD, accepting the AMA-ERF check on behalf of St. Louis University.

Greg Laiben, MD, gave the Missouri Patient Care Review Foundation Report, followed by Richard Bradley, MD, reporting on MOMEDICO.

Dr. Murrell appointed the Nominating Committee as follows:

District 1	Gary Dyer, MD
District 2	Ed Plowman, MD
District 3	Ed Cabbabe, MD
District 4	Jeff Copeland, MD
District 5	Hugh Stephenson, MD, Chair
District 6	Jerry Meyer, MD
District 7	Larry Rues, MD
District 8	Norm Knowlton, MD
District 9	Ed Jenkins, MD
District 10	Tom Sparkman, MD
HMSS	Kenneth Rall, MD
Student Section	Bob Puchalski

Continued on page 234

Continued from page 233

Vice Speaker Frederick DeFeo, MD, asked the House to stand for a moment of silence in honor of MSMA members who had died during the past year.

Dr. DeFeo then directed the acceptance and placement of four late resolutions.

After brief announcements the First Session of the MSMA House of Delegates was adjourned.

SECOND SESSION

The second session of the House of Delegates was called to order by Speaker Wolfe at 4 p.m. Friday, March 24, 1995.

William Allen, MD, gave the supplemental report of the Committee on Credentials: 10 officers, 32 Councilors, and 194 Delegates.

President H. Jerry Murrell, MD, presented the Legislative Awards recognizing the efforts of Representative Sheila Lumpe from St. Louis, District 72 and Senator Walt Mueller, from St. Louis, Senatorial District 15.

Vice Speaker Frederick DeFeo, MD, called for the reports of the Reference Committees. The following actions were taken on submitted resolutions:

Guest Speaker Warren F. Tingley, MD, former Vice President and National Medical Director of Travelers Insurance Companies of Hartford Conn., participated in the open forum discussion between physicians and AMA Delegates.

Reference Committee A

Chris Perryman, MD, presented the report of Reference Committee A. The following items were placed on the consent calendar:

Report of the Communications Oversight Committee
Report of the Constitutution and Bylaws Committee

The consent calendar was adopted by the House. The Committee then made recommendations on the following resolutions:

Resolution #2 Driving Skills Tests for Aging Population
Referred to Council

RESOLVED, that the MSMA prepare model legislation requesting the legislature to institute driving skills tests for Missouri citizens in the over seventy age bracket with drivers' licenses on an bi-annual basis.

Resolution #3 Sale of Tobacco
Substitute Resolution Adopted

RESOLVED, that the laws governing tobacco sales should cover all tobacco products, and be it further

RESOLVED, that sales of single cigarettes, sales of cigarettes from vending machines, and tobacco billboard advertising be banned, and be it further

RESOLVED, that the use of tobacco products by minors is illegal and that providers and minors breaking this law should result in a fine for both providers and minors, and a revocation of vending licenses, and be it further

RESOLVED, that increased excise taxes and licensure fees be designated to fund existing local enforcement agencies activities related only to tobacco, and be it further

RESOLVED, that local communities be allowed to establish and enforce their own local tobacco regulations even if stricter than state regulations, and be it further

RESOLVED, that the MSMA support legislation encompassing the above smoking regulations.

Resolution #10 Young Drivers & Alcohol Related Accidents
Amended Resolution Adopted

RESOLVED, that the Missouri State Medical Association encourage the Missouri State General Assembly to enact a zero tolerance law (defined as blood alcohol of 0.02 or greater) for drivers under 21 years of age to result in suspension or revocation of driver's license.

Resolution #11 Minors and Tobacco
Considered with Resolution #3

Resolution #12 Young Drivers
Not Adopted

Resolution #13 Encouraging Municipalities to Adopt Stricter Enforcement of Tobacco Sales to Minors
Considered with Resolution #3

Resolution #18 Consent to Immunization by Adults Who Have Care and Control of the Child
Referred to Council for Action

Theodore Glenn, MD, from Cape Girardeau, participating in the open forum discussion of issues with AMA Delegates and convention guest speakers.

RESOLVED, that the Missouri State Medical Association support the introduction and passage of the following bill:

Section 1.1. Any adult who has care and control of a child may consent to the immunization of a child, except as provided in subsection 2, if:

1) The legal custodian delegates verbally or in writing the parent's authority to consent to the immunization of the child;

2) The location of the legal custodian is unknown; or,

3) The legal custodian has been contacted and requested to consent to immunization and has failed to act, within ten days, on such request.

2. A person may not consent to the immunization of a child pursuant to subdivisions (2) and (3) of subsection 1 of section 1 if such a person has knowledge that the legal custodian has or would refuse to consent to the immunization.

3. A person consenting to the immunization of the child shall confirm in writing whether such consent is based on a written delegation from the legal custodian; an oral delegation from the legal custodian; the location of legal custodian being unknown; or whether the legal custodian has been contacted and failed to respond. Such writing shall be included in child's medical record.

4. A person who consents to the immunization of a child shall give the health care provider sufficient and accurate health information about the child and, if necessary, the child's family to enable the health care provider to determine whether the immunization is advisable.

5. Any person who consents to the immunization shall not be liable for damages arising from the immunization unless such person acts with willful misconduct or gross negligence.

6. A health care provider who accepts the health history required by this section shall not be liable for an adverse reaction resulting from factual errors in the health history unless the provider acts with willful misconduct or gross negligence.

7. A health care provider shall not be liable for damages arising from reliance on consent pursuant to this section unless the provider acts with willful misconduct or gross negligence.

Reference Committee B

Christine Cernick, MD, presented the report of Reference Committee B. The following items were placed on the Consent Calendar:

Report of the President
Report of MSMA Alliance
Report of Committee on Legislative Affairs
Report of the Secretary
Report of the Treasurer
Report of the Executive Vice President
Council Minutes
Report of the Missouri State Medical Foundation
Report of Physicians' Health Committee
Report of the Commission on Interspecialty Medicine
Report of the Committee on Publications

The consent calendar was adopted by the House.

Continued on page 236

Continued from page 235

The Committee then made recommendations on the following resolutions:

Resolution #1 Any Willing Provider Legislation Limited to Rural Areas

Referred to Council

RESOLVED, That MSMA study, and if feasible, pursue the passage of Any Willing Provider Legislation limited to rural areas.

Resolution #5 Direct Contracting Option for Health Care Providers

Referred to Council

RESOLVED, that the Missouri State Medical Association work for passage of model legislation by the Missouri General Assembly prohibiting sickness and accident insurers, health maintenance organizations, and health care corporations from requiring that enrollees obtain a referral from a primary care physician as a condition to payment for dermatological services. This allows all patients the freedom to choose to receive expedient cost-effective skin care from a dermatologist if they so desire.

Resolution #6 Shifting Choice of Health Care Benefits Away from the Employers to Employees

Referred to Committee on Legislative Affairs

RESOLVED, that the Missouri State Medical Association seek sponsorship for model legislation to remove health care from the employer and give the choice to the employee, allowing the employee to choose from at least ten offered plans with a range of benefits, (similar to the current Federal Employees Health Benefits Plan) and which allows the employee the tax deduction, and be it further

RESOLVED, that this resolution be forwarded to the AMA for action.

Michael J. Zylka, MD, of St. Louis addresses the issue of minors smoking with members of Reference Committee A: David Auner, MD, James Shaeffer, MD, Herluf Lund, MD, and Chair Chris Perryman, MD.

Resolution #9 HMO and Insurance Company Providers Reporting

Not Adopted

Resolution #16 Collaborative Practice Guidelines

Amended Substitute Resolution Adopted

RESOLVED, that except in extraordinary circumstances, the Missouri State Medical Association declares that a physician should not engage in a collaborative practice arrangement with more than two full time equivalent practice nurses and/or physician assistants at one time, and be it further

RESOLVED, that MSMA seek to establish a system of registration of all collaborative practice agreements within sixty days of their execution.

Reference Committee C

Sandra J. Ahlum, MD, presented the report of Reference Committee C. The following items were placed on the consent calendar:

Report of Commission on Continuing Education and Health Manpower
Report of the Committee on Continuing Medical Education
Report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations
Report of the Missouri State Medical Services, Inc.
Report of the MSMA Peer Review Consultant System

The Consent Calendar was approved by the House. The committee then made recommendations on the following resolutions:

Resolution #4 AMA Survey on Quality of Care in For-Profit Managed Care Plans

Referred to Council for Action

RESOLVED, that the AMA conduct an anonymous member survey on the quality of care delivered by for-profit managed care plans, using a statistically significant sample which, at the minimum:

- queries doctors as to whether their best professional judgment had ever been affected or

DR. CASE
DR SPARKMAN
DR GROSHONG
DR. MEYE

Members of Reference Committee B *left to right*: William Case, MD, Chair Christine Cernick, MD, Tom Sparkman, MD, Jerry Meyer, MD, and Ted Groshong, MD.

countermanded by policies of for-profit managed care plans, and

- queries physicians about whether they know about or be willing to testify about specific cases in which major quality of care problems resulted from the policies of the for-profit managed care plans, and be it further

RESOLVED, that the results of this survey be reported to the Department of Justice, the Federal Trade Commission, the National Association of Insurance Commissioners, Congress and the general public, and be it further

RESOLVED, that this resolution be submitted by the Missouri delegation to the House of Delegates at the AMA Annual Meeting in Chicago, June 1995.

Resolution #7 Coverage of Breast Reconstruction Following Mastectomy for Cancer and Pre-Cancerous Conditions by Insurance and Health Care Plans

Amended Resolution Adopted

RESOLVED, that the Missouri State Medical Association develop and seek sponsorship for legislation similar to section 1367.6 of the California Health Safety Code, to mandate insurance coverage of breast reconstruction following mastectomy for cancer and pre-cancerous conditions and to include in the definition of breast reconstruction, the surgical treatment of the opposite breast, if necessary, as well as reconstruction of the nipple and areola. Coverage should also include any implantable prosthetic devices utilized, whether temporary or permanent, and be it further

RESOLVED, that this resolution be forwarded to the AMA for inclusion in any basic health care benefit package.

Resolution #8 Single Medicare Carrier for Missouri

Not Adopted

Resolution #14 Declaration of Appreciation for Rush H. Limbaugh III

Not Adopted

Resolution #15 Fairness in the Treatment of Professionals' Files

Substitute Resolution Adopted

RESOLVED, that the Missouri State Medical Association pursue legislation to limit the charges any licensed professional can charge for copies of professional records and files, making those charge limits commensurate with those placed on physicians.

Resolution #17 Charges for Copies of Medical Records

Considered with Resolution #15

Hugh Stephenson, MD, chair of the Nominating Committee reported the following slate of officers for the ensuing year:

President Elect:	Daniel O'Sullivan, MD, *St. Louis*
Vice Presidents:	Howard Brabe, MD, *Independence*
	John Ansty, MD, *St. Louis*
	Paul Anderson, MD, *Neosho*
Speaker:	Frederick DeFeo, MD, *Kansas City*

Continued on page 238

DR AHLUM
DR LaFERRIERE
DR B
McCOWN
DR BASS

Members of Reference Committee C *left to right*: Chair Sandra Ahlum, MD, Keith LaFerriere, MD, Alan Braun, MD, Allan McCown, MD, and Barry Bass, MD.

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Daniel O'Sullivan, MD, accepts the nomination of MSMA President-elect at the final session of the House of Delegates.

Continued from page 237

Vice Speaker: John Rollo, MD, *St. Louis*
Delegates to the AMA (Jan. 1, 1996 - Dec. 31, 1997)
Robert T. Gibbons, MD, *Kansas City*
William Huffaker, MD, *St. Louis*
Peter Ekern, MD, *Mexico*
Alternate AMA Delegates (Jan. 1, 1996 - Dec. 31, 1997)
David Barbe, MD, *Mountain Grove*
H. Jerry Murrell, MD, *Columbia*
Robert Puchalski, Student, *St. Louis*

Mark Kasten, MD, 10th District Delegate, nominated William Shell, MD, for Alternate Delegate to AMA.

The House approved the slate of potential officers.

Following a remind that the reception following the Presidential Installation had been moved to Promenade A and B, the second session was adjourned.

THIRD SESSION

The Third Session of the House of Delegates was called to order by Vice Speaker Frederick DeFeo, MD, Sunday, March 26, 1995. The Supplemental Report of the Committee on Credentials was given by William Allen, MD: Officers, 10, Councilors, 32, and Delegates, 209.

Vice Speaker DeFeo then conducted the Election of Officers. John Donovan, MD, spoke on behalf of his partner, Dan O'Sullivan, MD, nominated President-elect. Norman Knowlton, MD, from Greene County Medical Society and Steve Buie, MD, of Metropolitan Medical Association, seconded the nomination. Dan O'Sullivan was elected MSMA President-elect by House.

Dr. O'Sullivan addressed the House in acceptance of the position.

The rest of the Officers and AMA Delegates were then elected. The Nominating Committee presented the slate of officers during the Second Session (*see page 237-8*).

The House then voted by written ballot for three positions of AMA Alternate Delegates from the four nominees.

While the tellers added the ballots Norman Knowlton, MD, presented the Report on the Election of Councilors. As a result of the respective caucuses, the following members were elected Councilors and Vice Councilors:

District 2	Councilor:	Carl Kruse, MD
	Vice Councilor:	Lent Johnson, MD
District 3	Councilors:	Gordon Goldman, MD Robert Miller, MD Arturo Montes, MD Meredith Payne, MD
District 4	Councilor:	Sam Farrell, MD
	Vice Councilor:	Jeff Copeland, MD
District 6	Councilor:	A. J. Campbell, MD
	Vice Councilor:	Jerry Meyer, MD
District 7	Councilor:	Larry Rues, MD Linda Dorzab, MD
	Vice Councilor:	Deborah Jantsch, MD
District 8	Councilor:	Clarence Martin, MD
	Vice Councilor:	James Wolfe, MD
District 10	Councilor:	William Shell, MD
	Vice Councilor:	Mark Kasten, MD
Hospital Medical Staff Section		
	Councilor:	Charles Barbee, MD
	Vice Councilor:	Luis Anglo, MD
Resident Physicians		
	Councilor:	Robert Swanson, MD
	Vice Councilor:	Mary Vest-Mason, MD

Student Section Councilor: Dawn Kleindorf
Vice Councilor: Nancy Poggi

President Frederick Hahn, MD, made the following Committee and Commission chair appointments:

Committee on Constitution & Bylaws
Donald A. Potts, MD, *Kansas City*
Physician Health Committee
Thomas Anderson, MD, *Columbia*
Committee on Planning
Phillip Hornbostel, MD, *Sedalia*
Committee on Publications
J. Regan Thomas, MD, *St. Louis*
Committee on Legislative Affairs
H. Jerry Murrell, MD, *Columbia*
Commission on Continuing Education and Health Manpower
Michael Vannier, MD, *St. Louis*
Commission on Medical Economics, Third Party Medicine and Governmental Relations
Carl Strauss, MD, *Kansas City*
Commission on Medical-Legal Affairs
Marc Taormina, MD, *Kansas City*
Commission on Public Affairs
Steve Bowlin, MD, *Kansas City*
Council on Ethical and Judicial Affairs (member)
Hugh E. Stephenson, MD, *Columbia*

It was announced that the 138th Convention will be at Tan-Tar-A, April 11 to 14, 1996; 139th will be in Kansas City on April 10 to 13, 1997; the 140th Annual Convention will be in St. Louis; 141st will be April 8 to 13, 1999, at Tan-Tar-A. On behalf of the Metropolitan Medical Society of Kansas City, Tom Allen, MD, invited the 142nd Annual Convention to be held in Kansas City in the year 2000.

While the House continued to wait for the ballot results Speaker James Wolfe, MD, thanked the House for tolerating his mistakes the past six years and thanked Jo-Ellyn Ryall, MD, for being his mentor regarding the Speaker's position.

David Barbe, MD, H. Jerry Murrell, MD, and Robert Puchalski were elected Alternate AMA Delegates.

The newly elected officers took the oath of office. Following the Installation of Officers, Speaker Wolfe adjourned the 137th Session of the Missouri State Medical Association.

Committee & Commission Reports

Constitution & Bylaws Committee

The MSMA Constitution & Bylaws Committee met on January 23, 1995, via facsimile to decide whether or not to revise the current Missouri State Medical Association Constitution & Bylaws, adopted 1903, revised April 1993. It was proposed that MSMA's Constitution & Bylaws be updated in accordance with the American Medical Association's policy to reflect gender neutral language in communications.

A unanimous decision was made by all members of the Constitution & Bylaws Committee to make the changes in the MSMA Constitution & Bylaws set forth in this proposal.

Arteso Rabora, MD, Chair; Lawrence Lampton, MD; Sheila Shah, MD; Jean Chapman, MD; and, Jerald Chaffin, MD

Communication Project Oversight Committee

Video Production Services

Working closely with the Council, the oversight communication committee and Dr. J. Regan Thomas, host and medical director, have agreed that the focus of this effort should be the production of short (two minute) news inserts for distribution to television stations around the state. KSDK, Channel Five in St. Louis, has expressed strong interest for utilizing this new MSMA service as a public service for their viewers and as a means of filling their weekly 14-hour-long news schedule. The news inserts will be offered via satellite distribution to other stations outside the St. Louis broadcast market area.

The project receives good support from MSMA members in the St. Louis area and we are working on an on-going basis with the St. Louis Metropolitan Medical Society to develop stories and secure the services of local physicians to participate with these taping sessions.

In addition to Dr. Thomas' services as medical director, MSMA staff member Dennis Weiser is assigned to this project as executive producer. Also, several television news production professionals in the St. Louis area are being used on an independent contractor basis. The Department of Elementary and Secondary Education Telecommunication Department, Jefferson City, continues to make equipment and post-production facilities available to MSMA at attractive rates.

In January, MSMA secured the services of Ramona Mormann, a professional fund raiser, to more actively seek

Continued on page 240

Continued from page 239

out financial support for communication projects. She is making calls on foundations, medical providers, vendors and other agencies. The Health Education Foundation, a 501 (c) (3), received its IRS approval in December 1994. The MSMA Alliance deserves many thanks for its early support of this new foundation.

MoMed Net

Based on costs and features for seven computer networks, it was agreed by the Communications Oversight Committee that a Missouri computer network, (MoMed Net) will be formed under the American Medical Association's Electronic Network (AMA/EN).

The AMA/EN can be used with many software programs and operating systems and offers the widest variety of information services, e-mail and bulletin board features for the lowest cost of a network connection. Under the AMA/EN, MoMed Net will offer access to 1,500 Federation/AMA executives and 25-40 information files, with unlimited phone lines and 1-800 dial-up access. The AMA may offer access to Internet e-mail by Fall 1995.

The proposed MoMed Net information files *may* include: weekly news briefings, socio-economic and scientific news; headquarters, component society and Alliance news; legislative updates with text of bills and sponsors; MSMA response/analysis to legislative issues; calls to action; Council Meeting/Annual Convention actions and news; and directories MSMA members.

According to MSMA staff member Lizabeth Starnes, systems operator of MoMed Net, the AMA has assured MSMA that technical/user support will be supplied through printed instructions, on-line and dial-up assistance. MSMA also has assured confidentiality of messages and security levels between users.

For the trial period of three months, MSMA will pay the $3,000 start-up and maintenance costs, which includes the setup of 35-40 MSMA accounts under MoMed Net, and the $2,000-3,000 telephone line charge, (approximately $.30 per minute). MSMA users will be assigned a limit on a per call, per day basis.

As the AMA reconfigures its electronic network, upgrades bulletin board software, and redesigns menu and conference areas, it is programming MoMed Net into its network, providing access to MSMA members in February.

Missouri Medicine

Changes in *Missouri Medicine* began with the January 1995 issue. The most important objective the Journal wants to accomplish is to improve the content so as to be useful for MSMA members, according to new Managing Editor Angela Allen.

Each month a story about a significant issue involving physicians will be highlighted on the cover of *Missouri Medicine*. Conceptual artwork will tie directly to the cover story.

Most of the departments have remained. A section highlighting important announcements from the legislative arena has been added. New Members, In Memoriam, and elements of the Medical School Section have been combined into Membership Notes containing news briefs on members' accomplishments. A Historical Section has been added drawing information from the 100 years worth of information archived at the Association.

This is a year of transition for *Missouri Medicine*. A fax-back page will run in every issue, inviting members to respond to and suggest changes.

Robert Wankum, MD; Linda Dorzab, MD; Duane Hellam, MD

Report of the Physicians Health Committee

The Missouri Physicians Health Committee met on May 7, July 23, September 19, 1994 and January 14, 1995.

It was the consensus of the Committee members that in order to strengthen the Missouri Physicians Health Program (MPHP) additional physicians were needed to interact with program participants. The medical director was asked to identify interested physicians to serve in designated areas of Missouri. A portion of the Medical Director's salary had been set aside to defray the costs needed physician services when the Medical Director is unable to fulfill that role.

In an effort to improve the relationship with the Missouri State Board of Registration for the Healing Arts, Mr. Henrickson, Executive Director and Dr. Geise, President of the Board of Healing Arts, were invited to discuss concerns regarding the MPHP. There have been occasions when the Board has needed more detailed information sooner than what the MPHP has provided which may have resulted form the Board not expressing a specific need to be notified in the event of a participant's non-compliance. It has been agreed that the MPHP will report on the non-compliance of mandated participants within 14 days of occurrence. Participants who voluntarily enter MPHP would be reported only by code number within 14 days of the occurrence.

Another concern expressed was the Board would like to have more interaction with the Medical Director of MPHP. This would facilitate future discussions regarding administrative aspects of the Program and would also assure the Board that someone is closely monitoring the participants in the Program.

The Committee members discussed the Board's concern regarding an appropriate time for a prospective participant to sign the advocacy agreement. It was the consensus of the Committee that this decision should be determined by the Medical Director on a case-by-case basis. The Board would be informed of these clinical decisions. The Medical Director has developed a good basis for communication with the Board and its staff.

A significant transition for the MPHP occurred early in September. Dr. Croughan selected Robert Bondurant, RN, LCSW, to replace the resigning Karen Sanders. Mr. Bondurant began his duties on September 6, 1994. Dr. Croughan has taken this opportunity to initiate a review of the program's requirements and operating procedures.

The MPHP staff is studying the feasibility of utilizing professional collectors to obtain participant specimens. The MPHP currently uses volunteer monitors to collect and send specimens to the toxicology lab at the University of Missouri in Columbia. The professional collectors would assure the confidentiality of each participant, maintain specimen chain of custody and minimize time staff devotes to supervising this function for an increasing number of participants.

Participants are currently required to attend monthly monitoring groups during their first year in the program. After the first year, attendance is determined on a sliding scale for the next four years.

Recommendation: *That all participants are required to attend monitoring groups monthly throughout the five years in the program.*

In accordance with the current policies, participants are billed for administrative fees on their seventh month in the program. MPHP staff is required to expend substantial time during the initial weeks of the participants involvement in the program. The Program does not recover costs for time invested in this initial phase.

Recommendation: *MPHP will begin all new participants the first day of the month following singing of the advocacy agreement.*

An additional three consultants have been placed under contract that will enable the Program to be more responsive to participants by coordinating monthly monitoring groups and conducting interventions. In addition, these new consultants will be instrumental in developing a higher profile with area hospitals.

The MPHP staff met with the Board of Healing Arts on several occasions to draft a memorandum of understanding between the Board and MSMA/Missouri Association of Osteopathic Physicians and Surgeons Physicians Health Program. The purpose of this agreement is to develop a cooperative relationship between the three organizations that will both safeguard the public and provide physicians the opportunity to return to practice through a system of detection, early intervention, effective treatment and monitoring. This memorandum of understanding has been formally approved by all three organizations.

The MPHP staff has forwarded letters to all Missouri hospitals soliciting contributions to the MPHP. Recognizing the importance of this support, MSMA and the Missouri Physicians Health Program would like to thank the following institutions for their generous contributions. It is because of this support that the MPHP can continue to assist physicians who are having problems which prevent them from functioning at their best.

Baptist Medical Center Medical Staff, Kansas City; Barnes - St. Peters Medical Staff, St. Peters; Children's Mercy Hospital, Kansas City; Christian Hospital, Northeast-Northwest, St. Louis; Cox (Lester E.) Medical Center Medical Staff, Springfield; DePaul Health Center Medical Staff, Bridgeton Freeman Hospital, Joplin; Heartland Health System and Medical/Dental Staff, St. Joseph; Incarnate Word Hospital and Medical Staff, St. Joseph; Independence Regional Health Center and Medical Staff, Independence; Insurance Services, Inc., Springfield; Jewish Hospital and Medical Staff, St. Louis; Medical Center of Independence, Inc., Independence; Missouri Baptist Medical Center, Town & Country; North Kansas City Hospital, North Kansas City; Pershing (General John J.) Memorial Hospital, Brookfield; Phelps County Regional Medical Center, Rolla; P.I.E. Mutual Insurance Company, St. Louis; St. Anthony's Medical Center and Administration/Medical/Dental Staff, St. Louis; St. John's Regional Medical Center, Joplin; St. John's Regional Health Center, Springfield; St. John's Mercy Medical Center and Medical Staff, St. Louis; St. Luke's Hospital, Chesterfield; St. Luke's Hospital of Kansas City, Kansas City; St. Mary's Hospital of Blue Springs, Blue Springs; Texas County Memorial Hospital, Houston; Truman Medical Center, Kansas City; Western Missouri Medical Center, Warrensburg

Thomas Anderson, MD, Columbia; Thomas Cochran, Springfield; David Wilkinson, MD, Councilor, Advisor, St. Louis; C. John Ritter, MD, Cape Girardeau; Hugh Bartlett, MD, Rolla; Charlotte Balcer, MD, Jefferson City; Jo-Ellyn Ryall, MD, St. Louis; Thomas Ahmann, MD, Mexico; Charles Sincox, MD, Washington; Donald McIntosh, MD, Lee's Summit.

Commission on Interspecialty Medicine

The Commission on Interspecialty Medicine met August 2, 1994. The Commission members discussed four resolutions that were referred by the MSMA Council: Resolution #4 Missouri Health Care Freedom of Choice; Resolution #9, PHO Open Enrollment for Qualified Physicians; Resolution #30, Communication Program Reforms and Resolution #31 Telemedicine.

Continued on page 242

Continued from page 239

The ramifications of the health care reform and managed care were of great concern to the Commission members. The members also expressed concern about the future of academic institutions responsible for training physicians even though there is a perceived abundance and/or maldistribution of physicians.

Commission members were informed that MSMA, Missouri Association of Osteopathic Physicians and Surgeons, and Missouri Hospital Association will issue a joint statement on: 1) tort reform; 2) antitrust, and 3) the definition, limits and control of managed care.

Recommendation: *MSMA appoint a task force to formulate recommendations regarding the anticipated changes in the practice of medicine as a result of managed care as well as state and federal legislation.*

Commission members discussed the activities of the Missouri Health Care Forum comprised of business organizations, unions, medicine, hospitals and insurers.

Recommendation: *MSMA revitalize the Missouri Health Care Forum.*

The Vaccines for Children Program (VFC) is federally funded and state operated. This program is part of the President's childhood immunization initiative, which has the goal of increasing immunization levels of two-year-olds to 90% by 1996. The VFC Program will supply the federally purchased vaccines to be administered to children.

Recommendation: *MSMA support the VFC Program and encourage physicians' participation in order to improve the level of immunizations in Missouri.*

Commission members discussed their role in developing the scientific program that will be held during the MSMA's 137th Annual Convention.

William Crowly, MD, Chairman, Neurological; Frederick Hahn, MD, Otolaryngology; Jay Portnoy, MD, Allergy; William Dorzab, MD, Pathologists; Don Arnold, MD, Anesthesiologists; Bernard Griesemer, MD, Pediatrics; George Hruza, MD, Dermatological; Thomas Leib, MD, Physical Medicine; Michael Szewczyk, MD, Emergency Physicians; Fred Thompson, MD, Plastic Surgery; William Soper, Family Physicians; Tom Anderson, MD, Psychiatric; Carl Strauss, MD, Internal Medicine; Edward O'Brien, Jr., MD, Radiological; Marcus McCorcle, MD, OB-GYN; Michael Bukstein, MD, Surgeons; Stephen Slocum, MD, Ophthalmological; Dennis Pyszczynski, MD, Thoracic; Thomas Highland, MD, Orthopedic; Michael Chehval, MD, Urological.

Committee on Publications

The ninety-first volume of *Missouri Medicine* contained 17 scientific articles and 26 "Perspectives" articles. The peer-reviewed articles, submitted by Missouri physicians and scientists, covered a wide range of medical reviews and case reports. The Perspective pages included editorials, personal experiences, and practical, legal and financial advice.

Several series of articles were included: The Missouri Department of Health continued their series, "Public Health Reports"; Medical Informatics Department at the University of Missouri supplied "Medical Informatics"; and, Tom Bennett, Executive Vice President, MSMS, Inc. submitted a series on "Physician Leadership." The monthly specialty quiz continued this year with Ophthalmology, thanks to the organizational skill of Dr. John C. Hagan, III, MD.

Council supported suggestions for changes in the format of *Missouri Medicine* as part of the communication proposal approved by the House of Delegates at the 136th Annual Meeting. A new format will began to take shape with the January 1995 issue. Membership input is invited.

The communication project has redirected the work of previous Managing Editor, Dennis Weiser, to production of video programs. In addition to his new position as Director of Medical Television, he remains with *Missouri Medicine* as senior correspondent. Angela Allen was promoted from Editorial Assistant to Managing Editor in July.

The Publication Committee and Editor, J. Regan Thomas, appreciate the contributions of the members and others who have filled the pages of *Missouri Medicine* with interesting, enjoyable articles. The Committee also appreciates the Association's continued support of the Journal.

J. Regan Thomas, MD, Chair; Philip C. Anderson, MD; John S. Daniels, MD; John C. Hagan III; Donald G. Sessions

Commission on Continuing Education and Health Manpower

The Commission on Continuing Education and Health Manpower met on May 31, 1994.

On March 18, the Accreditation Council on Continuing Education approved the reaccreditation and was commended for being in substantial compliance with the Essentials and Guidelines for Continuing Medical Education.

The Chairman of the Commission participated in a Task Force meeting to discuss Resolution #30 - Communication Program Reforms.

The task force recommended that the Commission on Continuing Education and Health Manpower formally assess the needs and interests of the MSMA membership to provide a cost-effective CME program.

In 1976, MSMA was recognized as the intrastate accreditor of institutions and organizations seeking recognition as a sponsor of CME activities. To defray the expenses of these activities, fees were established at $250 for the initial accreditation and $150 for reaccreditation. These fees are still in effect today. The consensus of the Commission members was that these fees should be increased.

Recommendation: *MSMA establish a single accreditation fee in the amount of $350.*

Commission members discussed the feasibility of utilizing Category 2 activities in addition to Category 1 activities to satisfy the CME requirement for relicensure.

Category 2 activities are formal learning events that satisfy the AMA definition of CME, conforms to the AMA ethical opinions on gifts to physicians and is based on perceived or demonstrated educational needs. This activity is designed by the unit responsible for the sponsor's ACCME or state medical society accredited program. These events would specifically include the non-offerings such as tumor conferences and case conferences that do not qualify for Category 1 credits.

Recommendation: *MSMA support the utilization of Category 2 activities in addition to Category 1 to satisfy the state requirements for relicensure.*

Michael Vannier, MD, Chair, St. Louis; David Martin, MD, Chesterfield; David Hall, MD, Councilor, Advisor, Rogersville; York Silliman, MD, St. Joseph; Gerald Duling, MD, St. Charles; Gregory Tobin, MD, Cape Girardeau; William Gondring, MD, St. Joseph; J. Thomas Critchlow, MD, Mexico; John Kelly, MD, Joplin; Michael Bukstein, MD, Hannibal; Richard Heimburger, MD, Jefferson City; Aly Mohsen, MD, Springfield; David Glover, MD, Warrensburg; William Larsen, MD, Shawnee Mission, KS; George Trimble, MD, Kansas City; George Evans, MD, Columbia.

Committee on Continuing Medical Education

The Committee on Continuing Medical Education met on May 31, August 18, November 16, 1994 and January 19, 1995.

The Committee members devoted considerable time and energy in planning the Third Annual Conference on CME which was held at the Marriott's Tan-Tar-A Resort on September 23-24, 1994. This conference provided the 50 participants with information to deal systematically with compliance issues and a demonstration of telemedicine.

The Committee members reviewed each accredited sponsor's 1994 Annual CME Report summaries to assess compliance with the Essentials. Sponsors will be notified of the Committee's concerns and actions necessary to correct deficiencies.

MSMA received notification that the Committee for Review and Recognition (CRR) met on September 11, 1994 to review the association's Interim Report on accreditation activities. The CRR accepted this report and extended their appreciation to the MSMA Committee on Continuing Medical Education and their hard work.

The Committee members reviewed the results of the CME needs assessment survey randomly forwarded to approximately 1400 members of MSMA. A summary of this survey was published in the January issue of CME Bulletin which was also disseminated to accredited institutions and organizations in Missouri.

The Committee reaffirmed its policy on the appropriate time that sponsors are required to allocate for a Category 1 educational offering. Education must be in a single consecutive period. Credit hours are based on hour-for-hour participation in a CME activity (except for reports of residency training, fellowships, and similar activities, and the publication of journal articles). CME should be reported in one hour blocks.

The Committee members discussed the development of an educational network that would primarily link rural hospital staffs with recognized CME providers which would include the four Missouri medical schools. This network would utilize existing or proposed telecommunication systems to achieve sustainable cost-effective distance learning. The goal of this innovative network is to provide educational offerings in local communities to assure physician accessibility.

Recommendation: *MSMA appoint an Ad Hoc Committee to study the feasibility of establishing an educational network for CME.*

The primary function of this Committee is to accredit institutions and organizations as sponsors for Category 1 credit that will enable physicians to meet the requirements for state, hospital and specialty boards. There are numerous activities such as tumor conferences, case conferences and grand rounds considered valuable educational experiences even though they do not meet the criteria for Category 1 credit. It is unfortunate that although Category 2 is considered of equal or greater educational value in some instances to Category 1, most physicians tend to discount these "second class" opportunities for education. In many instances, these educational offerings have been terminated by the hospital or local medical society CME sponsors in Missouri.

Recommendation: *MSMA work with the Missouri State Board of Registration for the Healing Arts to revise the CME requirements permitting physicians to report Category 1 and Category 2 for state relicensure.*

Several of the rural institutions and organizations that MSMA has accredited as CME sponsors have expressed interest in strengthening their medical libraries.

It was the consensus of the Committee members to develop a partnership with the Missouri Rural Area Health Centers to jointly assess hospital resources and pursue obtaining grant(s) from the National Library of Medicine.

The Committee members recommended the following organizaitons be recognized as sponsors for CME activities based upon their compliance with the Essentials and Guidelines for continuing medical education:

Continued on page 245

Presidential Address by H. Jerry Murrell, MD

Good morning! This part of our annual meeting is set aside for a "State of the Association" Address... a year in review.

At this time last year we were all concerned about President and Mrs. Clinton's health care system cost and financing bill. Wow! What a national uproar that caused! And how quickly forgotten are some of the key players and concepts ... today, one can ask, "Ira who?"

Simultaneously, we were feverishly dealing with Governor Carnahan's similar suggestions for Missouri. His Clinton-like bills occupied a lot of our collective attention and energy. Fortunately, both President Clinton's and Governor Carnahan's ill-conceived and ambiguously written tomes were defeated.

The MSMA rallied to the clarion call and lobbied effectively both in Washington and in Jefferson City. Physicians across the state became aware, concerned and **active**. Through letters, phone calls, faxes, personal visits in home districts, and personal visits in Jefferson City, our legislators became aware of their constituent physicians' concerns. Close coordination between the component societies and the MSMA central office led to a successful conclusion. The bills were defeated for the moment. Radical changes were slowed down and incremental changes seemed much more reasonable, both nationally and in Missouri.

Your Association DOES take pride in this legislative effort. Logic would dictate that such concrete evidence of membership benefit would translate into increased membership. Unfortunately, this hasn't happened.

We have fewer members in 1995 than we had in 1994. I challenge each of us to personally recruit a practicing physician who is NOT a MSMA member and to encourage his or her application for membership. Biblically and historically, the dictum of "strength in numbers" has proven true over and over. The history of labor unions in the 19th and 20th centuries of America lend credence to this truth. We **MUST** remain united and increase our numbers if we are going to continue to be successful in playing a pivotal role in health care system evolution.

Throughout this intervening year, legislation has occupied a paramount position in the activities of the MSMA. During the summer, we led an effort to draft legislation for introduction in the 1995 legislative session. Our osteopathic and hospital colleagues joined us in this effort. In the current session of the legislature, there are several bills sponsored by MSMA.

The two most publicized ones, Senate Bill 197, the Patient Fairness Act, and Senate Bill 318, the Insurance Market Reform Bill...have both come out of senate committees with a "do pass" recommendation. We must continue to lobby with vigor for the passage of these and several other bills despite a long list of powerful opponents. **Please** continue to work with your component societies in an effort to play a role in this evolution of health care financing and delivery in Missouri.

The Department of Health is evaluating the needs and available resources of Missouri through its CHART program and with financing from a Robert Wood Johnson Foundation grant. MSMA will continue to work closely with the Department and attempt to play a decisive role in evaluating the findings and conclusions of the Department. We may call on individual members here to be involved with CHART.

The structure of our relationship with our sponsored insurance company, MOMEDICO, changed last year. That change is recorded in a special report in your handbook.

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Newly installed MSMA President Frederick Hahn, MD, presents the Presidential Plaque of Appreciation to Immediate Past President H. Jerry Murrell, MD.

Another change last year evokes the old saying, "The King is dead! Long live the King!" After 26 years of faithful service, Royal Cooper retired as Executive Vice President from MSMA. The Executive Committee and the Council searched for a successor. Four candidates were interviewed in depth - and Cork Swarens was named as Executive Vice President. He took office January 1 and has had his hands full. He is doing a fine job. This well-organized meeting is a testimony to his talent.

Last year, I admonished you to stay tuned - stay alert - stay active! You responded and our society, although minimally smaller, is strong, healthy and vigorous. Your Councilors, Officers, and AMA Delegation are hard working, dedicated members who contribute untold hours on behalf of the Association - without recompense. I am proud of them and doubly proud to have been allowed the privilege and honor of serving the year as your president. I thank you.

Continued from page 243

Alexian Brothers Hospital, St. Louis; Fulton State Hospital, Fulton; Boone Hospital Center, Columbia; Kansas City Research Consortium, Kansas City; Bothwell Regional Health Center, Sedalia; Liberty Hospital, Liberty; Central Ozarks CME Foundation, West Plains; Menorah Medical Center, Kansas City; Christian Hospital NE-NW, St. Louis; St. John's Regional Health Center, Springfield; Columbia Regional Hospital, Columbia; St. John's Mercy Hospital, Washington; Deaconess Hospital, St. Louis; St. John's Regional Medical Center, Joplin; DePaul Hospital, St. Louis; St. Joseph Health Center, Kansas City; Freeman Hospital, Joplin; St. Joseph Hospital of Kirkwood, Kirkwood.

Michael Vannier, MD, Chair, St. Louis; David Hall, MD, Councilor, Advisor, Rogersville; Gerald Duling, MD, St. Charles; John Kelly, MD, Joplin; Richard Heimburger, MD, Jefferson City; George Trimble, MD, Kansas City; David Martin, MD, Chesterfield; York Silliman, MD, St. Joseph; Gregory Tobin, MD, Cape Girardeau; Michael Bukstein, MD, Hannibal; Aly Mohsen, MD, Springfield; William Larsen, MD, Shawnee Mission, KS; George Evans, MD, Columbia.

Commission on Medical Economics, Third Party Medicine, and Governmental Relations

All resolutions discussed were from the MSMA 1994 Annual Convention.

Resolution #4 *Missouri Health Care Freedom of Choice*
Resolution #9 *PHO Open Enrollment for Qualified Physicians*
Resolution #16 *Health Care Market Competition*

Resolution #11 *Clarification of Diagnostic and Procedural Coding* is currently being addressed by the ICD-10 which will supersede ICD-9-CM. The Commission recommends resolution #11 be filed pending additional information to determine if ICD-10 will meet the specific concerns mentioned in this resolution.
Resolution #27 *Medicaid Reimbursement for Immunizations* was discussed based on information received by MSMA staff. Missouri Medicaid is currently overhauling their vaccination program and will try to use the HCFA1500 whenever possible. At this time the Commission recommends resolution #27 be filed.

George J. Hruza, MD, Chair; George P. Hubbell, MD; Ann C. Peick, MD; James T. Rogers, MD; Narendra Shah, MD; Carl F. Strauss, MD; Luis B. Anglo, MD; Alan L. Braun, MD; Kenneth J. Dempsey, MD; Albert W. Marchiando, MD; Stephen R. Crespin, MD; Milamari A. Cunningham, MD; William S. Donnell, MD; Ronald W. Riner, MD; Randall E. Treadwell, MD.

Installation of the MSMA Alliance President Nona Nan Chapman

How often have you heard the phrase, "It's like preaching to the choir?" I interpret this phrase to mean, don't blame them, they're always where they should be, doing what they're supposed to be doing.

What do choirs do? They sing, of course. They are people singing different parts who are organized and trained to sing together. I currently spend four and one-half hours a week doing choral singing, two of those are spent rehearsing with the Choral Union at Southeast Missouri State University. So, choirs prepare themselves in order to do their best when singing together. Choirs also LEAD. They set the pace and tone so that others may follow along. Let us compare a part of the structure and purpose of the Medical Alliance to that of a choir.

Section leaders in our Alliance Choir are our four Vice Presidents and I would like to share with you a part of their vision for the coming year:

Singing the melody (or soprano) in our Alliance choir this year is Donna Corrado, Vice President and Health Projects coordinator.

Donna asks us to participate in S.A.V.E. Today. Stop America's Violence Everywhere in Recommendation #2 of the AMA Alliance's Strategic Planning Task Force. Following passage in June, it will be instituted October 11, 1995. Every County and State Alliance is asked to create awareness and spur action against the violence that is becoming so prevalent in our society. In the area of Health Promotion, S.A.V.E. Today will be the primary focus. There are any number of shelters and support groups who need our help.

Next to the melody line, we find the alto voice singing in harmony about education and research. Vice President and AMA-ERF Chair Angela Zylka stresses the continued need for support of our medical schools. The current cost of one hour of medical education is $21.03. According to a recent report out of Washington University, this is due to increase by 7% this year.

"Tenoring" our choir's efforts to protect patient's rights we hear from Becky Moore again this year as Vice President and Legislative Affairs Chair. If you are a physician or a spouse of a physician we want you to mark your calendar NOW with the following date: March 5 & 6, 1996 when the MSMA and the Medical Alliance will experience a Joint Day at the Legislature in Jefferson City. While visiting State Senator Peter Kinder during this year's Day at the Legislature, I asked what five word message he would have for physicians today. He responded, "Two words: Get involved." to which he added, "and DO IT NOW!"

MSMAA 1995-96 President Nona Nan Chapman presented MSMAA Immediate Past President Jean Wankum with an engraved plaque in gratitude for her year of service to the MSMA Alliance.

The foundation of any organization is in its membership and singing the bass line of membership in our state Alliance is Millie Bever. In addition to being Vice President in charge of membership development, Millie will serve as Chair of Members-at-Large (that body of members not represented by an organized county Alliance). We will again be encouraged to Recruit, Retain and Regain members in the Medical Alliance.

Every choir director needs an assistant who is behind the scenes doing a large portion of the work which enables the magic wand of the director to produce angelic sounds. President-elect Joan M. H'Doubler, herself nothing short of an angel, has already pledged her assistance in strengthening the bass line in our MSMA Alliance choir. Increasing our membership must and will be a priority of your President-elect and your President.

Recognize the difference in the process of dues billing and membership recruitment. Recruitment involves repetition. Remember the number seven. Many times it requires that many contacts to retain a member in an organization. It may require us doing things in a little different way. We must stay with our campaign until we've reached our goal. Be it by invitation, fax, e-mail, telephone, telegraph, telefloral or by tell-a-member, REMEMBER: There is nothing better than personal contact.

What's in a name, or in this instance a "song title?" Before recruiting members, we must have a sound, viable, healthy and productive Alliance which will attract members. We need to involve our new members immediately in projects which encourages them to become a viable part of the group. Allow the new member the space to put down roots in his or her new Alliance home.

My choral Union group is led by Dr. John Egbert. He has shared with us the fascination he had in Junior High with choral music and with composer Carl Orff. Dr. Egbert remarked that in his wildest adolescent dreams he never thought he would be directing a performance of Orff's Carmina Burana as head of the Choral Department at Southeast Missouri State University.

My fellow Alliance members, never in my wildest adolescent dreams, would I have placed myself in this honorable position of leadership with which you have vested me today. I am thankful for parents who gave me life, for my husband who invited me to share in his life and for his encouragement. I am thankful for our children who have enriched our lives, and for our grandchildren who will write the next verse. But to the Medical Alliance through its leadership training programs, I have a true sense of gratitude for the opportunity to grow and express myself. To sing a familiar refrain: The doors of friendship just keep opening up.

As leaders in our communities, we must exemplify the high standards set by the Medical Alliance. Believe in the organization and its objectives. Build on this belief with faith in the membership. St. Francis of Assissi said: "It is no use walking anywhere to preach unless our walking is our preaching."

As one voice in your choir, I leave you with the following:

Take note! We shall never pass this way again, therefore...do it now!

1994-95 Alliance President Jean Wankum's Address to the MSMA House of Delegates

It is my pleasure to speak to you today on behalf of the Missouri State Medical Alliance. As many of you know, the name of our organization was changed from auxiliary to alliance over a year ago to reflect the change in the organization. The practice of medicine is changing and as your partners, we need to effectively address the issues and changes brought about by health system reform.

Our organization is an active group of women and men with a wide variety of skills, talents, and professions who are bonded together by our common bond, having a physician spouse.

As I traveled the state this year to attend meetings in your counties, one fact was evident. Managed care and hospital acquisition of practices have created a climate of uncertainty, frustration, and at times less than amicable conditions among the medical community. The county medical societies need to remain strong as the one avenue left for physicians and their spouses to come together to discuss medicine and the needs of your communities.

Last fall the Alliance held our Fall Conference in Springfield. The main speakers focused on "Managed Care and Its Effect on the Medical Family." The program's purpose was twofold. The regional director of a large managed care corporation explained managed care and the directions that it hopes to take medicine. He also educated the membership on such issues as capitation. The AMA Alliance speaker focused on how all these changes affect the physician, the day-to-day stress it adds, why practices are changing, and the financial impact on the medical family.

One of our goals as an organization is to assess health care needs in our communities and thus to find or develop programs to address these needs. Some of our current programs in your communities address teen pregnancy, family violence, indigent health care, and relief for the caregivers of the elderly to only name a few. We have health education programs which vary from health adventure centers to being

Continued on page 248

Continued from page 245

As part of Medical Alliance month in March, we will be offering education on helmet safety. We were requested by the MSMA Legislative Committee to offer community education in this area prior to legislation being attempted.

We have learned the effect legislative endeavors can have on medicine and as a result, we continue to hold mini-internship programs in numerous counties. These programs allow individuals from the community such as legislators, businessmen, lawyers, and journalists, to follow a physician for several days to a week. They walk side by side as the physician deals with the fast paced schedule, long hours, dying patients, the patient's families and all the day-to-day demands of practicing medicine. The interns do have a debriefing time so they can discuss with the physicians and other interns the happenings of the week. The old saying "actions speak louder than words" seems to be true of this program. Actual experience of the practice of medicine rather than being told about it, leaves a lasting impression with these individuals.

The Alliance continues to annually hold Day at the Legislature. It begins with a presentation of pending medical legislation by an MSMA lobbyist. This is to familiarize everyone with present bills, their current status, and the important features of each of these bills. We meet in the Capitol for coffee and rolls with legislators and take this time to become better acquainted, discuss medical issues, and answer questions they may have regarding legislation.

Other legislative activities include participation in campaigns, voter registration, and responding with a systematic approach when contacted regarding an alert on national legislation.

As some of you know, tonight we have a fundraiser for the AMA-ERF. This is just one of the ways funds are being raised for medical student loans, scholarships and research. Last year the AMA Alliance raised over $2 million for this cause. Our state Alliancecontributed over $30,000. At the present time we are close to our goal for this year. So I would like to strongly urge you to join us for "Music of the Night" as we gather on the 30th floor of the Laclede Building at the Media Club for a delicious dinner and professional performance. Your contribution of $50 per person will go entirely to AMA-ERF as the dinner and performance have been generously underwritten. So please join us. If you cannot, please consider a contribution to this worthy cause.

MISSOURI STATE MEDICAL ASSOCIATION
MISSOURI STATE MEDICAL ASSOCIATION

MSMA Alliance President Jean Wankum addressing the Missouri State Medical Association House of Delegates.

(Presentation of checks to Medical Schools.)

May I leave you with this thought? We can do none of these activities without our members which number about one-sixth of that of the Association. Although we are small in number, we do carry a big impact. To quote Bette Reese, "If you think you're too small to be effective you have never been in bed with a mosquito."

We would like to see our numbers grow so our effect can be even greater! Please give your spouse a gift of membership and encourage her or him to join this very talented, diversified group who work diligently for the good of their communities, medicine, and most importantly, you, the physician.

Registration

Members

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Abd Ahabi, MD
Sandra Ahlum, MD
Bashir Ahmad, MD
James Allan, MD
Thomas Allen, MD
William Allen, MD
Tom Anderson, MD
Ray Andrew
Luis Anglo, MD
George Anstey, MD
John Anstey, MD
Donald Arnold, MD
Jennifer Ashby, MD
Thomas Ashley, MD
J. David Auner, MD
Lata Bagwe, MD
John Baker, MD
Vernon Balster, MD
Michael Banton, MD
David Barbe, MD
Charles Barbee, MD
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Floyd Barnhill, MD
Barry Bass, MD
Steven Baughman
Gregg Berdy, MD
Susan Schukar Berdy, MD
Douglas Berson, MD
Grant Bever, MD
Arjun Bhattacharya, MD
Joseph Bizek, MD
Geoffrey Blatt, MD
Kevin Blinder, MD
Arnold Block, MD
George Bohigian, MD
Carl Bosley, DO
Richard Bradley, MD
William Bradshaw, MD
Alan Braun, MD
William Brian, MD
Arnold Brody, MD
Seymour Brown, MD
Lester Bryant, MD
Barbara Buchanan, MD
Steven Buie, MD
Michael Bukstein, MD
Mark Bult, MD
Nancy Bunge, MD
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Gary Carter, MD
Alfred Caruso, MD
William Case, MD
Frank Catanzaro, MD
Michael Caughron, MD
Christine Cernik, MD
Jean Chapman, MD
Jonathan Chilton, MD
Octavio Chirino, MD
M. Ishaq Chishti, MD
Sophia Chung, MD
Jennifer Clark, MD
Michael Clarke, MD
Loran Clement, MD
Bruce Cohen, MD
Harry Cohen, MD
Valeria Cohran
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Harry Cole, MD
Manuel Comas, MD
James Conant, MD
Robert Conway, MD
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Joseph Corrado, MD
Nicholas Couper, MD
Patrick Coyne, MD
James Criscione, Jr., MD
William Crowley, Jr., MD
Mila Cunningham, MD
Michael Curry, MD
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Walter Davisson, MD
Frederick DeFeo, MD
Jonathan Dehner, MD
Cielo Navato-Dehning, MD
Karel deLeeuw, MD
Ferd DelPizzo, MD
Kenneth Dempsey, MD
Pablo DeUngria
Ananda DeSilva, MD
Jag Devkota, MD
James Diestelhorst, MD
Pattye Digthon
John R. Dixon, MD
Darrell Domann, MD

Medical students left to right: Bob Puchalski, Daniel Overduck, Pattye Digthon, Richard Sipes and Amir Jalali, testing the Heartstart 3000 demonstration in the exhibit hall.

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Linda Dorzab, MD
William Dorzab, MD
Gary Dyer, MD
Jon Dyer
Michelle Eason, MD
G. W. N. Eggers, Jr., MD
Harry Eggleston, MD
Carl Ehrlich, MD
John Eisenbeis, MD
H. Peter Ekern, MD
Jean Ellis, MD
E. Eyermane, MD
Daniel Fabito, MD
Donald Fakhoury, MD
Mary Faller
Thalia Farazi
Sam Farrell, MD
Farida Farzana, MD
Anthony Fathman, MD
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Bryan Finke
Linda Fisher, MD
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Jhonson Flores, MD
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Roger Francis, MD
August Furla, MD
Arthur Gale, MD
August Geise, MD
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David Gibson, MD
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Jose Gonzales, MD
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Howard Greene, MD
Ted Groshong, MD
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Charles Miller, MD
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Robert Miller, MD
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Jay Milne, MD

MISSOURI STATE
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MSMA Director of Communications Lizabeth Starnes demonstrates the Bulletin Board System in the exhibit hall.

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J. Micheal Zylka, MD

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Karen Winters, MD
Edward Wright, MD
John Yanos, MD
Marc Young, DO
Rene Zamora, MD
S. Rami Zarnegar, MD
Frank Zwemer, MD

Total Registration at the 137th MSMA Annual Meeting was 835.

Efficacy of Thymectomy in Myasthenia Gravis

Ghazala Hayat, MD, Yusuf Ata Mohyuddin, Keith Naunheim, MD

We sought to determine the efficacy of thymectomy in patients with myasthenia gravis (MG). The roles of age, gender, age of onset of MG, acetylcholine receptor antibodies (AchR's) titers, and pathology of the thymus gland were evaluated. Twenty-one patients were analyzed retrospectively. Twenty patients belonged to *Osserman* Class IIA or higher; 71.42% belonged to IIB. All patients were on either anticholinesterase and/ or immunosuppressive agents. The mean follow up was three years. Seventy-six percent of the patients showed improvement by *Osserman* and by "results of treatment" classification, 14.28% were in complete remission, on no medications. The age, gender, age of onset, thymic pathology and AchR titers had no correlation with post-operative improvement. With longer follow up the beneficial effect is more apparent.

Myasthenia gravis (MG) is an autoimmune disease affecting the postsynaptic neuromuscular junction. The basic pathology consists of blockade, accelerated degradation and complement related injury to the AchR's.[1] Later in the disease process the synaptic cleft is noted to be shallow with fewer folds. The disease manifests itself clinically with fluctuating weakness affecting the bulbar and limb muscles. Ocular and neck muscles are involved earlier in the disease process in about 80% of the patients. The treatment consists of pharmacological and surgical intervention. Patients can be effectively treated with anticholinesterase agents, steroids and other immunosuppressive agents. Plasmapheresis is usually used for respiratory distress or marked weakness. Recently, some investigators have tried gamma globulin infusion with encouraging results.[2] Thymectomy as an adjunct therapy for myasthenia gravis is gaining widespread acceptance among neurologists and cardiothoracic surgeons as a cause for improvement and, in other cases, prolonged clinical remission. We studied the effect of thymectomy on the progression of MG. We looked into the roles of age, gender, age of onset of MG, AchR's antibodies titers and pathology of the thymus gland.

Patients and Methods

We studied retrospectively 21 consecutive patients who underwent thymectomy for treatment of MG between January 1984 and July 1993. All of these patients were examined by either G. H. and/ or K. N. Ages ranged from 4 to 65 years (mean 36 years). There were 12 (57%) men and 9 (43%) women.

The interval from diagnosis of MG to thymectomy varied from 1 week to 13 years, with a mean

Table I. The Osserman Classification of Myasthenia Gravis

Class	Symptoms
NL	Asymptomatic
I	Ocular involvement only
IIA	Mild generalized myasthenia
IIB	Moderately severe generalized myasthenia with bulbar symptoms
III	Acute severe generalized myasthenia with bulbar impairment
IV	Late severe disease

Table II. Pre-operative Osserman Classification

Osserman Classification	Count	Percent
NL	0	0%
I	1	4.762%
IIA	4	19.048%
IIB	15	71.429%
III	1	4.762%
IV	0	0%

interval of 12.7 months. The clinical status of the patient was assessed according to the *Osserman* classification (Table 1). The predominant *Osserman* classification immediately prior to thymectomy was IIB (71.4%)(Table II).

Pre-operatively, 18 patients (86%) were receiving Mestinon and 8 (38%) were taking Prednisone, with mean dosages of 356 mg per day and 23 mg per day, respectively. Seven patients (33%) were taking both medications simultaneously and none of the patients were undergoing plasmapheresis or receiving chemotherapy.

AchR's antibodies were obtained in all but one patient because of direct referral for thymectomy prior to surgery (Fig 1). Five (23.8%) had normal levels (less than 0.5 nM/L) and 15 (71.43%) had levels ranging from 0.6 to 61 nM/L (mean 14.2 nM/L) (Fig 1).

Surgery

Twenty patients underwent a median sternotomy incision with total extracapsular excision of the thymus as well as the anterior mediastinal fat pads. The single remaining patient underwent a transcervical thymectomy. There was no post-operative mortality; morbidity was limited to 3 patients (14%). One developed pneumonia and was mechanically ventilated. Pulmonary congestion and atelectasis were noted in the other two patients.

Patients were followed every six to eight weeks during the first year. Later, if they were stable, the follow-up was on three-month intervals.

Continued on page 254

Figure 1 AChR antibody titers prior to thymectomy

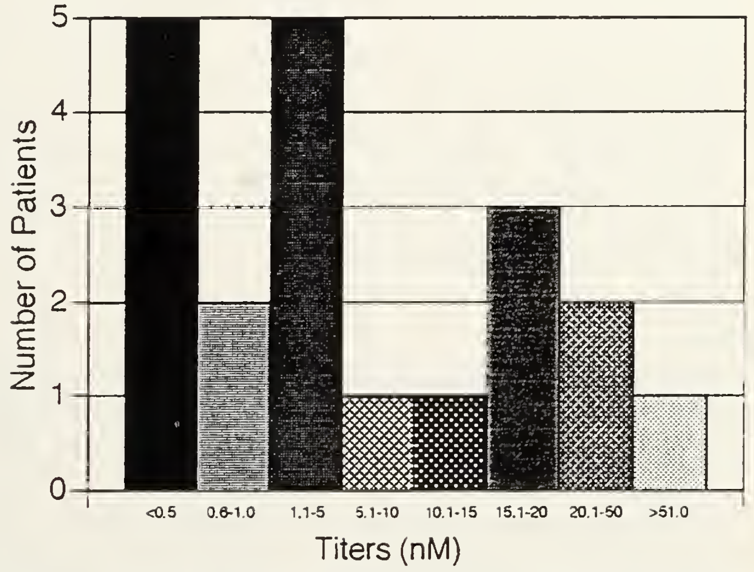

Figure 1. Pre-thymectomy AchR's antibody titers. Five (23.8%) with normal and 15 (71.43%) with levels ranging from 0.6-61 nM/L (mean 14.2 nM/L).

Figure 2 Histopathology of excised thymus

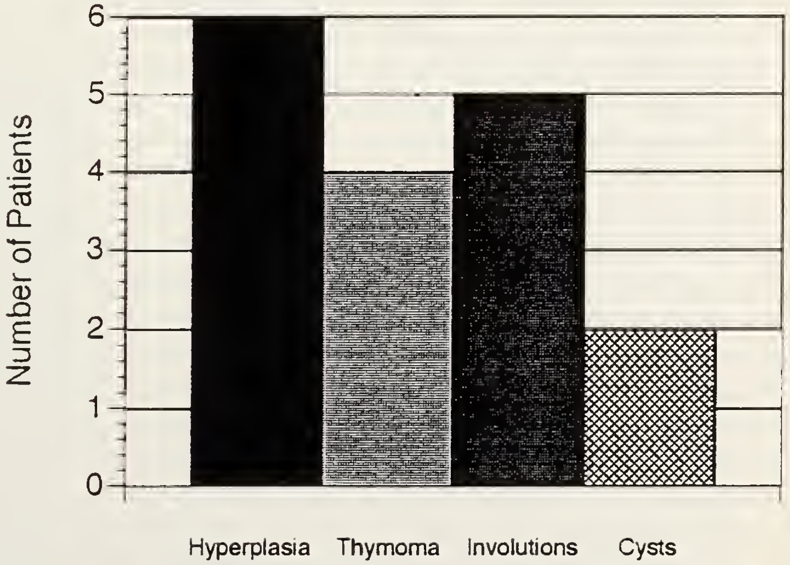

Figure 2. Histopathology of thymus. Most frequent was hyperplasia 29%) followed by involution (23.3%).

Table III. "Post-operative Osserman Classification"

Element	Count	Percent
I	3	14.286 %
IIA	3	14.286 %
IIB	3	14.286 %
III	0	0 %
IV	0	0 %
NL	12	57.143 %

Table IV. "Results of Treatment" Classification

I. Complete Remission
  A. Without any medication
  B. With medication
    1. Immunosuppressive drugs
    2. Steroids
    3. Anticholinesterases
    4. Combinations of 1, 2, and 3
II. Improvement
  A. Marked
  B. Moderate
III. Unchanged
IV. Worse
V. Dead

Table V. "Results of Treatment"

Element	Count	Percent
IA	3	14.286 %
IB1	0	0 %
IB2	2	9.524 %
IB3	4	19.048 %
IB4	3	14.286 %
IIA	2	9.524 %
IIB	2	9.524 %
III	5	23.81 %
IV	0	0 %
V	0	0 %

Continued from page 253

Statistical analysis

Statistical analysis regarding the different factors, i.e. age, gender, AchR's antibodies and age of onset, was evaluated by Chi-square analysis.

Results

The histology of the thymus was recorded in all patients (Fig. 2). The most frequent finding revealed by histologic examination of the excised thymus was thymic hyperplasia (N=6, 29%). In this hyperplasia group the mean age was 29.7 years. The incidence of thymic cysts was 10% (2 patients). Both of these patients also showed an involuted thymus, which was also seen in 3 other patients. Four patients (19%) showed thymoma, while invasion of the capsule was not seen in any of the patients.

The patient's response to operation was graded according to *Osserman's* scale (Table III). The mean follow-up time was 3 years (range of 2 months to 10 years). One male subject died 21 months post-surgery due to sudden cardiac arrest unrelated to his MG. Overall improvement, remission, or control with reduced post-operative dosage of drugs) was obtained in 76% of the patients. This was gauged according to "results of treatment" classification (Table IV) which predicts better the outcome post-thymectomy as it takes into account the patient's condition and medications post-surgically. Maximum improvement was noted in IB$_3$ and IB$_4$ class, patients on anticholinesterases or a combination of drugs, including steroids and/or immunosuppressive agents. The results are very similar to *Osserman* classification, according to which 76.19% of patients showed improvement (Table III). Correlation of pre-operative *Osserman* types with post-thymectomy results shows the highest improvement of *Osserman* IIB (Fig 3). No correlations could be established between pathology of excised thymus and improvement (p=.1717 for thymoma; .6269 for thymic hyperplasia) by Chi-square statistical analysis. Efficacy of thymectomy and post-operative changes in AchR's antibody titers had no significant correlation. Post-operative titers of AchR receptor antibodies could not be obtained in 6 patients due to loss of follow-up. The gender, age of onset and time period between diagnosis and surgery had no statistical significance.

Discussion

MG is an autoimmune disease which it T-cell dependent and B cells are the effector. The T-helper cells perceive AchR's as "foreign objects" leading to release of lymphokines. Lymphokines induce B-cells to

FIG 3. **Pre& Post Operative Osserman Classification**

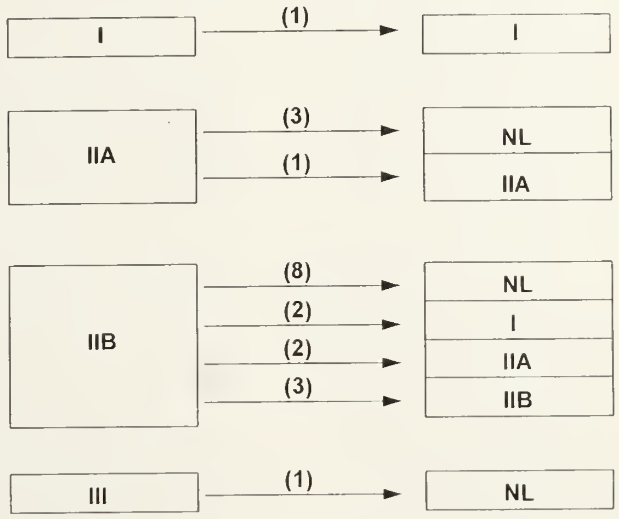

Figure 3. Pre- and post-operative *Osserman* Classification showing improvement in different classes, with maximum improvement noted in Class IIB. Mean follow-up 3 years.

produce AchR's antibodies against the alpha-subunit of AchR's.[3] The antibodies, after cross-linkage to the receptors cause increased endocytosis, complement mediated damage to the postsynaptic membrane and, at times, blockade of the AchR's. This leads to decreased number and density of AchR's and shallow synaptic cleft.

The treatment of MG is multimodal, consisting of pharmacological and surgical approaches. It is tailored according to clinical presentation and severity of the disease. For acute exacerbation plasmapheresis and gammaglobulin therapy is shown to be effective.[2,4] Long-term therapy consists of anticholinesterase and immunosuppressive agents. As thymus is the primary site of the cellular autoimmune response, it is postulated that AchR-specific CD4 cells are activated and expanded in the thymus so thymectomy is performed to induce remission.

In 1939, Blalock[6] reported favorable outcome after thymectomy for MG patients. Since then, the surgical management has gradually shown to be effective in either ameliorating the symptoms for sustained periods of time or increasing the probability of remission. By performing thymectomy the abnormal antigens in the glands, i.e. myoid cells,[7] are removed as well as the primary fault in the thymus immunoregulatory system, leading to improvement in the patients' symptoms over time. Recently, more emphasis has been placed on early thymectomy rather than late.[8-10] The improvement is noted in about 60-80% of the patients over time.[11-17] Despite reports of these favorable outcomes, skepticism exists about the indication of this procedure. Also, the role of age, duration of symptoms, AchR's antibody titers, and the pathology of the thymus gland is obscure at times.

We analyzed the data of 21 patients who were evaluated at our institution for MG and underwent thymectomy. As only one patient had transcervical thymectomy, conclusions about safety and efficacy about this procedure cannot be made. In 1977, Jaretzki[18] recommended the thoracic approach, as at times the thymic tissue may be left in the mediastinal fat with partial to no improvement in the patients. All efforts were made surgically to remove as much thymic tissue as possible, as this has shown to yield much better results. We believe in order to achieve this objective, medical sternotomy is still a better procedure than the transcervical approach. None of the patients underwent re-exploration as the surgeons felt all of the tissue was removed surgically. In our series, men were represented slightly more than women (M=57.14%, F =42.86%), which is different from other reported series. The difference probably reflects our criteria to select patients for thymectomy. We believe any patient diagnosed with MG who is medically stable and not a surgical risk should undergo thymectomy. The option for thymectomy is presented to all the patients who are diagnosed to have MG. The slight difference in the ratio may be due to reluctance of the female patients to undergo this procedure. This may be due to fear of surgical intervention and cosmetic reasons, especially when patients presume their disease to be stable and "not severe."

Continued on page 256

Continued from page 255

We analyzed the results in two ways. One was post-surgical *Osserman* classification (Table III) with mean follow-up time of 3 years. This showed that 12 patients (57.14%) became asymptomatic, although they still required medications, and 28.56% improved to a lower class. The other analysis was done according to results of treatment classification (Table IV) as this represents the results of surgery better, and patients can be followed more easily. According to this 16 (76.91%) patients improved. Out of these 3 (14.28%) were in complete remission without any medications (Table V). Although this classification seems complex, it gives a better picture of long-term efficacy of thymectomy.

We did not find any strong correlation between pre-surgical AchR's antibodies and post-operative improvement. The relationship between antibody titers, clinical presentation, and prediction of post-surgical improvement is still a debate. Although some investigators have shown some correlation, it was noted to be significantly changed years after the thymectomy.[19] Bartoccini et al[20] reported a fall in the titers with clinical improvement, while Olanow[12] did not find any concomitant fall in AchR's antibody titers with clinical improvement. The possible explanation for these series have been due to heterogeneity of patients with or without thymoma, immunosuppressive therapy and inclusion of patients with onset of symptoms at late age. It may be the reason that we did not see any statistical correlation between antibody titers and post-operative improvement. Later on with prolonged follow-up, we may see a decline in antibody titers. At times the maximum effect may be seen with a longer follow-up. Mulder et al showed higher remission rate with follow-up for 24 years (mean 7.4 years).[21]

No conclusion could be drawn if different factors were evaluated separately, as the number of patients in different categories was low. The most common thymic pathology noted was hyperplasia followed by involution, but no correlation existed between pathology and post-operative improvement. Although we did not stain with thymosin alpha-1, an immunopotentiating peptide which has been shown to stain thymic epithelial cells in between the fat tissue.[22] These cells may very well be immunologically active and play a role in the pathogenesis of this disease. Interestingly enough, we had high incidence of thymic cysts not reported earlier. But his factor also did not effect the outcome.

The duration of symptoms prior to surgery did not have any effect on the outcome of thymectomy. It has been recommended that earlier thymectomy has a beneficial effect.[8-10] Most of our patients were operated upon within the first year of initiation of symptomatology. Few patients who underwent surgery later also improved. The improvement gauged by grades in these patients was not statistically significant.

Our study conforms with Papatestas et al[10] in respect to no correlation noted between age of onset and age at which the procedure was performed.

In our study only one patient belonging to Class I *Osserman* underwent thymectomy and the symptoms remain unchanged, but his follow-up is short (less than one year). We can only presume to see improvement after a longer period. In our institution, patients with Class I (*Osserman*) are usually not referred for surgery primarily due to the fact that not enough supporting data is present for its efficacy. Schumm has suggested[23] that it is beneficial. Papatestas recommended thymectomy to be performed on patients with ocular symptoms and electrophysiologically but not clinically, having evidence of generalized disease.[24] Also, an unexpected high proportion of thymomas is noted in patients over age 40 with ocular disease.[24] The point is raised that by operating upon patients belonging to Class I, we can prevent generalized disease.

As residual thymic tissue or regeneration of the gland is implicated to be the cause of failure/recurrence of symptoms. We prefer to use the sternal approach. Different approaches have been advocated for the optimal to best results for thymectomy. Cooper et al[25] recommended a transcervical approach, as it can provide adequate exposure and in immediate post-operative period fewer complications are noted. The post-operative stay is also noted to be shorter, i.e., about two days. He recommends this approach for surgeons experienced in this procedure. Jaretzki prefers "maximal" thymectomy which includes exploration of the neck and thymus.[26]

In recent years physicians are increasingly referring patients with MG for thymectomy as it is establishing itself as a beneficial therapeutic procedure. We have also shown that it had a beneficial effect in 76% of patients. We believe that with longer periods elapsing after surgery will show more beneficial effects. The beneficial effect of thymectomy is noted more with longer follow-up, usually to 7 years.[21] *Osserman* classification is very helpful for clinical staging, but we found that to follow a patient, "results of treatment" scale gives more information and is a better indicator. We also recommend that the procedure can be performed safely and with good results in any myasthenic patient at very young or late age if there is no medical/surgical contra-indication. The patient's age, sex, age of onset of symptoms has shown in our study to have no bearing on the outcome.

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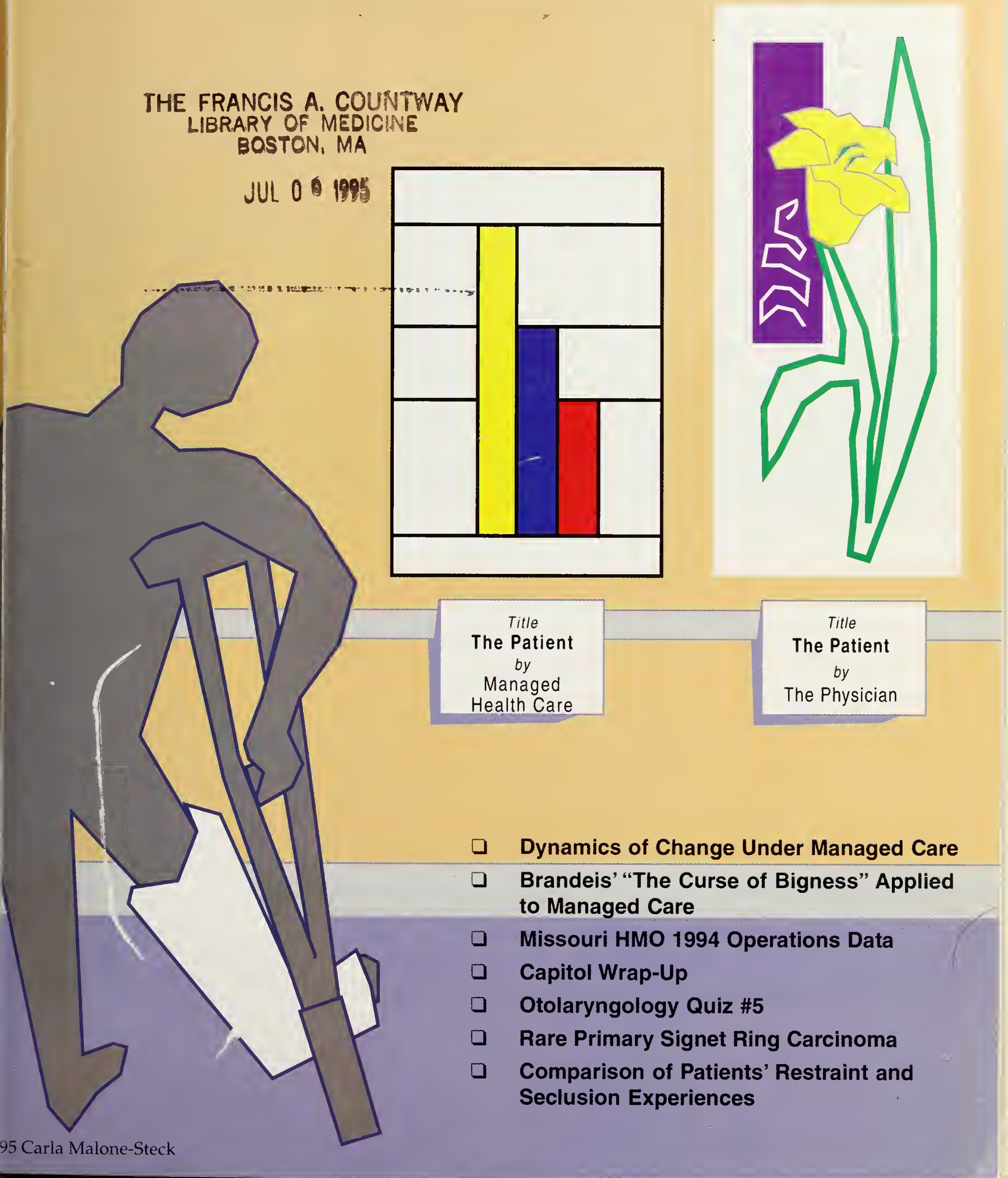
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MISSOURI MEDICINE

VOLUME 92, NUMBER 6

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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Editor's Desk

"On spitballs and bubbles" 269
J. Regan Thomas, MD

On the Cover: Physicians are concerned with Managed Care because of the focus on cost rather than quality of care. Design by Carla Malone-Steck, a professional fine artist and graphic designer in Jefferson City, Missouri.

President's Page

Managed Care Disrupts the Patient-Physician Relationship 270
Frederick Hahn, MD, MSMA President

Perspectives

The Role of the Physician in the Dynamics of Change Under Managed Care 286
Tom Bennett, Executive Vice President, MSMS, Inc.

Can American Democracy and the Profession of Medicine Survive the Giant Managed Care Oligopolies? Justice Louis D. Brandeis and "The Curse of Bigness" 290
Arthur H. Gale, MD

Echoes from Washington University, Class of March '43 274
Wilfred E. Wooldridge, MD

Scientific Section

Otolaryngology Quiz #5 - *Scott Estrem, MD* 277

Rare Primary Signet Ring Carcinoma of the Pancreas 299
Carole P. McArthur, MD, PhD, Russell Fiorella, MD and B. M. Saran, MD

A Comparison of the Restraint and Seclusion Experiences of Patients with Schizophrenia or Other Psychotic Disorders 303
Kemal Sagduyu, MD, Robijn D. Hornstra, MD, Stuart Munro, MD, and Virginia Bruce-Wolfe, PhD

Capitol Wrap-Up 272
MSMA Student Section 280
Membership Notes 282
Missouri HMO Update 295
Letters to the Editor 296
CME Calendar 308
Classified Listings 311
Historical Record 312

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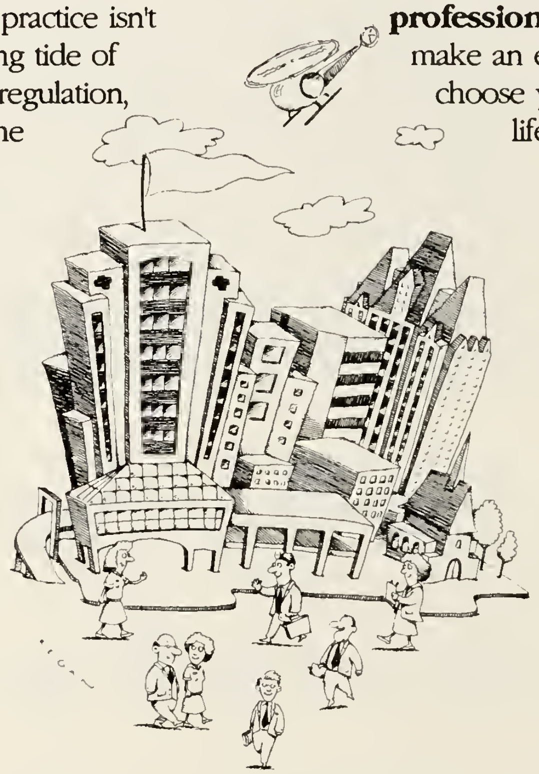

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Editor's Desk

"On spitballs and bubbles"

J. Regan Thomas, MD, Editor

Professional baseball made it back and world series dreams for Royals fans and Cardinals stalwarts are again in full swing here in Missouri. But, for all the fun and excitement that came home with the end of the baseball strike, there is one time honored activity connected with baseball I wish had not returned: chewing tobacco.

An article from the February 21, 1995 issue of the *Washington Post* sites surveys showing that 30 to 40% of major and minor league baseball players "dip snuff" or chew tobacco. They play important role models for many young people and unfortunately smokeless tobacco may be part of that image. In fact, according to U.S. Department of Agriculture, while cigarette consumption fell, the use of smokeless tobacco increased during the three year period of 1990 through 1993. Americans chewed or dipped about 60 million pounds of smokeless tobacco products in 1993 (an increase of 7 million pounds from 1990).

As a member of the American Academy of Otolaryngology - Head and Neck Surgery, I recently received data noting that 16% of all males between the age of 12 and 17 chewed tobacco last year. Of the 12 million people in the United States who use smokeless tobacco regularly, 3 million are under 21.

Many experts feel that kicking the habit of smokeless tobacco is even tougher than stopping smoking. Smokeless tobacco users get about twice as much nicotine in the blood stream as smokers do. That "nicotine high" is of course one of the attractions. Nicotine and other tobacco-related chemicals are absorbed directly through the mouth and stomach into the bloodstream.

This year about 30,000 new cases of oral cancer will be diagnosed. Approximately 9,400 people will die from oral cancer. Use of tobacco products is the major risk factor. According to the AAO-HNS, the risk of developing cancer of the mouth, lip, tongue, cheek, and throat is four times greater for smokeless tobacco users.

Of course, like me, any of you who is a parent of someone in the 12- to 17-year-old group I mentioned earlier, realize that cancer statistics make very little impact. The attempt at persuasion with the most clout seems to be related to smokeless tobacco use and the opposite sex. Even in today's "grunge rock" and dress down era, stained teeth, cracked discolored lips, and gum and mouth sores are still a turn off. Someone with brown teeth, bad breath, and always looking for somewhere to spit tends to have more trouble finding a date. (Those of you without teenagers may write me to find out about "grunge" and "dress down.")

Even baseball players are trying to stop. Former baseball star Nolan Ryan is part of a campaign by baseball officials and players to publicize the risks of smokeless tobacco. Ryan was quoted in the *Washington Post*, "I started thinking about the negative aspects of it and the positive aspects. I couldn't come up with any positive aspects." Reportedly about two-thirds of the professional ball players who use smokeless tobacco are trying to quit or cut down.

So as the ball season progresses and the split finger curves and occasional spitballs are thrown, I'm hoping all the chewing is bubblegum (sugarless to be sure!). Let's congratulate all of those in the dugouts who have quit smokeless tobacco. As physicians, let's continue to coach those in the stands to be safe at home from tobacco products too. MoMed

President's Page

Managed Care Disrupts the Patient-Physician Relationship

Frederick Hahn, MD, MSMA President

Nearly every media source we confront says, "Managed Care is here and it is here to stay."

My observations would confirm that managed care is indeed here. My innermost sentiment would cause me to doubt its longevity.

Now, many, including our Congress, much of the business world, particularly those institutions profiting from managed care and even a large segment of our patient population are ready to accept Managed Care as appropriate MEDICINE for our health care ILLS.

I do not propose to speak the mind of the membership of MSMA at this time. Instead I would like to share some of my personal and innermost considerations regarding health care.

Let us assume for the moment that Ms. Health Care is a patient presenting to us, a generalist, in our modern managed care office.

Let us consider Ms. Health Care along with the other patients we must evaluate today:

- some with diabetes,
- some with coronary heart disease,
- some with psoriasis,
- some with fractures and lacerations,
- some with rheumatoid arthritis,
- and some with various forms of cancer.

As we extract Ms. Health Care's History of Present Illness, we find that this humble being is suffering from many maladies:

- from escalating costs (including medicine and prosthetics),
- from mal-distribution of care,
- from the avarice of the tort system,
- from the lack of portability of her care,
- from the exclusion of pre-existing disease,
- from the prescription of medications and clinical therapy by administrative personnel,
- from the fear of antitrust measures,
- and just maybe, even from a touch of greed on the part of her physician.

As we pursue her History of Present Illness, Ms. Health Care pulls out a list of current medications. These include a number of prescriptions, many are so new that the manufacturer is still able to charge exorbitant prices for their research and development. Let's look at this list

- HMOs,
- PPOs,
- IPAs,
- HPAs,
- MSOs,
- etc.

At the bottom of her list is a sample medicine which she has been told is better than anything out there to date. It is like adding the capital "D" to Seldane. This new medicine is "PPO-C." The Capital "C" stands for "Capitation."

Thirty years ago radiotherapy was a new tool. It was used for what was felt to be an enlarged thymus in a small child, to reduce the size of enlarged tonsils and adenoids, to control acne and eradicate basal cell cancers of the skin. Today, we are still caring for distorted cartilages and bones, irradiation changes of the skin and tumors of the thyroid and parathyroid gland resulting from those treatment indiscretions of times past.

At the moment, primary care physicians are having to revisit the merits of the calcium channel blockers with the information (whether valid or not) that the use of these medications for arrhythmias may increase the risk of myocardial infarctions by as much as 60%.

With the realization that some trends are errant, let's return to Ms. Health Care. As we look for the appropriateness of the prescriptions on her list, we are told that we must use the generic. One company has gobbled up another until now, instead of choosing from 30 different HMO's, she must choose from only three. And in fact, only one is on her formulary.

Ms. Health Care reminds me of some of the patients I used to see coming into the department of medicine at the university hospital. She is carrying a grocery sack full of prescriptions so confusing that the only course available is to throw the whole sack out and start over.

Let's look at indications on the bottles of medicine which Ms. Health Care has in her big brown sack before we throw them in the waste basket:

- this first one prevents her from seeing the doctor she has seen for most of her adult life;
- the next one will give the doctor more money at the end of the year if he will just tell her to buy an over-the-counter antihistamine decongestant rather than referring her to an ENT doctor to straighten her deviated septum;
- this one says, "the whole waiting room is full of people anxious to be seen since it doesn't cost any more to come to the doctor 20 times than it does just once. So doc, don't do anything more than look at the left ear because it's the only one which hurts anyway.";
- here's one that says, "the doctor who I wanted on my panel is too booked to see me. So I have to see this jerk. Maybe if I just treat him like dirt, he will move somewhere else.";
- this new one with the capital "C" says, "It's a beautiful day out there doc, you don't even get a pittance more for seeing a long list of complainers, so hurry through this batch of folks on your panel and get on out to the golf course (or if you can't afford it, go on over to your second job at K-Mart)."

As I review all of these remedies in my mind, I am overwhelmed with the impression that they are designed to treat but one thing and that is THE BOTTOM LINE. It's the expectation of a miracle drug and the reality of thalidomide. It is the guise of Quality Assurance but the reality of profitability for the peripheral players in health care.

We have empathy for the patient who comes to the office with insulin dependent diabetes. As physicians, we are going to collectively do everything the system allows to give that patient a longer, more pleasant and productive life. In all likelihood the dietary considerations and blood glucose will not be the only parameters which must be addressed. There is apt to be consideration directed at cholesterol, hypertension, peripheral vascular disease, retinopathy and nephropathy. Some of these areas may well require the expertise of sub-specialists.

These considerations will be given with loving care because you know and respect that patient. That patient admires and trusts you because he or she picked you out from among all the rest. The patient-physician relationship is one of the very most important ingredients in that patient's care.

In the direction Managed Care is going today, that almost sacred patient-physician relationship is all but completely sacrificed.

I suggest that Managed Care is just one more devastating illness thrust upon our patient population. It is as crippling as polio, as frightening as the plague and as deadly as AIDS. There are risks meted out to our patients and to us, the care givers. The spoil is meanwhile divided among the managed care organizations with savings derived through reduction in costs gained primarily by reduction in services to the patients and reduction in reimbursement to QUALIFIED caregivers. The systems as purported today are a threat to our grand old profession and to the ethical fibers we have struggled to maintain.

How are we going to address this vicious health care menace?

From this ill-fated adventure in commercialism I must trust that we will be able to learn some lessons for a better health care system in the future, such as:

- better information systems,
- better quality control,
- improved efficiency, and yet,
- voluntary choices for both patients and physicians.

Despite our troubling encounter with managed care, I sincerely hope that continuing advocacy and concern for our patients' welfare will remain paramount in our practices. The equal and eternally important corollary is the preservation of our patient-physician relationship. MoMed

Capitol Wrap-Up

The 1995 legislative session came to a close May 12. Following is a summary of bills that passed:

SB 125 - Intractable Pain Act

Drafted by the MSMA and the Board of Healing Arts, it will allow physicians greater latitude in prescribing controlled substances for the treatment of intractable pain. *The Governor has already signed this bill into law. It takes effect in late August.*

SB 186 - Temporary Licensure

The Board of Healing Arts, the state's training institutions, and MSMA collaborated to pass this technical corrections measure. It repairs faulty language in current statute that would have eliminated many prospective residents from being licensed to train in Missouri.

HB 217 - Boating Safety

This bill will impose a 30 mph speed limit on boats operating at night, prohibit anyone younger than 14 years old to operate a watercraft without an onboard supervising adult, and impose noise restrictions on motorboats. *The Governor has already signed this bill into law.*

SB 175 - Optometry

This bill will allow certain optometrists to treat glaucoma.

HB 178 - Organ Donations

The bill will establish an organ donor registry and awareness program within the Department of Health.

SB 69 - Podiatrists & Chiropractors

Originally SB 69 dealt with licensing for social workers, audiologists, and family and marital therapists. Late in the session language was amended onto this bill to allow certain podiatrists to perform ankle surgery and which appears to grant hospital privileges to chiropractors. MSMA was able to weaken both of these measures but was unable to stop them entirely.

HB 717 - Motorcycle Helmets

The bill was amended late in the session to reduce the penalty for failure to wear a helmet while operating or riding on a motorcycle to a maximum $25 fine. This will effectively eliminate enforcement of the state's helmet law.

SB 3 - Consent Agreements

Grants state licensing boards the authority to enter into a consent agreement without first filing a formal complaint against the licensee.

SB 27 - Breast Cancer Insurance

Requires insurers to offer coverage for the treatment of breast cancer by dose-intensive chemotherapy/autologous bone marrow transplants or stem cell transplants.

SB 102 - Ignition Interlock

Allows courts to order the use of an ignition interlock device on the automobiles of convicted drunk drivers.

HB 424 - Capital Punishment

This Department of Corrections package initially contained language that would have authorized physicians to participate in lethal injections. The bill passed, but MSMA was able to remove the offensive provision.

What Did Not Pass

Patient Fairness Act (SB 197) was passed by the Senate, but stalled by the House Insurance Committee. **MSMA's Insurance Market Reforms (SB 318)** was out of committee in the Senate, but fell victim to time constraints caused by bills relating to concealed weapons and abortion.

Lay Midwifery (HB 112) would have legalized the practice of lay midwifery. It passed the House overwhelmingly, but was killed in committee on the Senate side. The MSMA alternative, **Nurse Midwifery (SB 336)** came out of committee, but was never debated by the full Senate.

DWI/Zero Tolerance (HB 252) passed the House but ran out of time on the Senate calendar.

Statute of Limitations (HB 255) would have prohibited most disciplinary proceedings against any licensed professional unless filed within five years of the alleged violation. This bill also made it throught the House and died on the Senate calendar.

Generic Substitution (HB 240, SB 308) would have allowed pharmacists to make a generic substitution unless the prescriber hand wrote "Brand Medication Necessary" across the face of the prescription form. The bill was kept in committee but the language was amended onto another bill late in session. MSMA succeeded in having the language removed just before the bill was passed.

Continued on page 275

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Echoes from Washington University, Class of March, '43

Wilfred E. Wooldridge, MD

The old saying, "Never look back," is wrong. Dead wrong!

I find great pleasure in looking back, and some of the greatest of all is to recall the doings of my medical school class. We had some beauties! Maybe all classes have their clowns, but one thing is certain. Our's were unforgettable!

We came along at a harried time. The second World War was going full tilt. We were on what was called an "accelerated program." That meant we went to school eleven months a year and being the first class of that program we graduated in March instead of June. The military needed us as soon as we could get there.

Along with that accelerated program went an accelerated nine month internship. I ended up with three months on Barnes medicine, three months at St. Louis Maternity and another three at St. Louis Children's. That was fine with me. I was not interested in surgery, and surgery was not interested in me. However, since I was soon marching off to war, my exposure to obstetrics and pediatrics did seem a little odd.

Enough of that! It's the guys in our class who crowd my memory. The war came and went and some of them did too, but those remembrances will never wane.

I remember one chap who could do things with words and was an inveterate punster. Our professor of psychiatry was Edwin Gildea. It was said he married one of the prominent pharmaceutical Lilly family. "That," said my friend, "was Gildea-ing the Lilly." Another time he asked, "What did Adolph Hitler say to Eva Braun?" The answer was, "I'm Nazi 'bout you!"

Even some of our faculty seemed a little fey at times. Dr. Nathan Womack, a general surgeon, lectured us one day about backache. He had a way of saying things which made indelible impressions. His lecture began, "I believe it was 11,276 years ago, this month, that some smart aleck got off all fours and decided to walk upright. That was about ten o'clock in the morning. By three-thirty he had a backache and backaches have cursed mankind ever since."

And where else but among medical students would you have heard this? A classmate married a fine gal who had to temporarily drop out of medical school to have a baby. My wife and I saw them frequently and envied the healthy, handsome and happy offspring. At about three months the baby began to do little things. The comment of his medical student mother, "Isn't it wonderful! I can just see his little tracts myelinating."

And who will forget the sessions with Dr. Ernest Sachs. Although a neurosurgeon, he was a wonderful teacher of the physical examination. He could seize any patient with an interesting condition and make him into a superb instructional clinic. With each patient he summoned a student from the amphitheater and questioned him about what he saw and thought about the patient. Putting together the reputation, the thick-lens glasses and the ample paunch of Dr. Sachs, all of which he projected at the hapless student, it was a fearsome experience.

Dr. Sachs proceeded alphabetically through the class. One of our members with a name near the end of the alphabet grew more nervous each week and was reduced to quivering jelly on the morning his name was called. The patient, a middle-aged man, had greatly enlarged bilateral inguinal lymph nodes. Dr. Sachs turned back the sheet, exposed the nodes and said, "What do you see?"

The student's only answer was an unintelligible blubbering, which would have been the same if he had been asked his name.

The next question was, "What do you feel?"

The student fumbled about and finally said there were some inguinal swellings.

"Tell me about them, man! Tell me about them! Are they discrete?"

By that time the student was incoherent. After another prod or two he replied, "No. They are indiscreet."

That did it.

Dr. Sachs lost that round. He didn't want to laugh in front of the poor student and the patient. He turned away from the class, walked to the opposite wall, stood with his back to us and we could see shaking with uncontrollable laughter.

The student barely made it back to his seat and sat there in despair and disgrace.

Was it a wasted clinic? By no means! For me it has provided more than fifty years of amusement.

In the pediatric lectures Dr. Alexis Hartman took over on the subject of acid-base balance. He was the originator of lactate-Ringer's, or Hartman's Solution. One's success, or failure, in pediatrics depended in no small measure on the understanding of this intricate subject.

Unfortunately, two of us hit the acid-base balance lectures at a time when we were on a busy service which kept us up most of the nights. In an attempt to stay awake we would go by the Barnes Pharmacy an hour before the critical lectures and each take two 7 1/2 grain capsules of caffeine benzoate. As I recall, that is about the equivalent of two cups of strong coffee.

Then we would go to the acid-base balance lectures, sit near the front and-----sleep like babes.

Also, there were two fellows in our class who manufactured a poisonous brew they called "grappa." This could be done only in the coldest part of winter. They inoculated grape juice with baker's yeast and let it stew four or five days. This took place in a retort with a water seal. When the fermentation was going good the apparatus emitted an obscene gurgle from time to time and was thus known as "f--ting John." Hopefully, at the end of the fermenting period the weather would be cold so that the mess could be set outside on a window sill at night and the frozen portion removed the following morning, leaving the alcohol. If all went according to plan they had the means to become ferociously inebriated on Saturday night. How many times I heard in anatomy lab the remark, "Hey, it's to be cold this weekend," then hear the reply, "It's my turn to get the grape juice. You set up f--ting John."

And another time we left the dorm to walk to school on a bitterly cold morning. "My Lord," was the comment, "it's colder than a gravedigger's proctodeum."

Who can forget experiences like those? On my darkest days of these many years I have been able to sit back and wish I could re-live it all again.

Maybe I can't go back, but I can sure remember back. It was wonderful! MoMed

CAPITOL WRAP-UP

Continued from page 272

Workers Compensation (SB 32) was a comprehensive reform package. The bill came out of committee but never made it out of the Senate. MSMA fought to ensure that the bill did not contain a physicians' fee schedule (Medicare's fee schedule had been discussed) and worked to clean up unfavorable language relating to practice parameters and the determination of impairment.

Informed Consent for Mental Health (HB 669) was intended to address the controversial issue of repressed memories and the so-called "false memory syndrome." It would have imposed numerous informed consent requirements on mental health providers. It died in committee.

Universal Health Care (HB 50) would have created a Canadian-style single-payor health care system in Missouri. It came out of committee but was defeated on the House floor.

First Responders/Defibrillators (HB 516) would have allowed Greene County to participate in a demonstration project for specially trained first responders to use automatic external defibrillators. Currently only EMTs may use the devices. The bill stalled late in session and the language was amended onto another bill, but time ran out before it could be passed.

Radiologic Technologists (SB 121) would have provided new regulations for radiologic technologists. It came out of committee but was not taken up by the Senate.

Acupuncture (SB 217 and HB 427) would have granted licensure to acupuncturists. Neither bill came out of committee.

Tobacco - State Pre-Emption (SB 388, HB 541) would have prohibited local governments from enacting any ordinance to regulate the sale, distribution, or use of tobacco products. It would have eliminated countless effective and innovative anti-smoking ordinances currently in force across the state.

The legalization of marijuana for medicinal purposes, **Marijuana (SB 457)**, never came out of committee.

Pickup trucks will remain exempt from the state's seatbelt laws. The **Seatbelts in Pickups (HB 459)** bill died in committee. MoMed

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Otolaryngology Quiz #5

by Scott Estrem, MD
Division of Otolaryngology, University of Missouri - Columbia

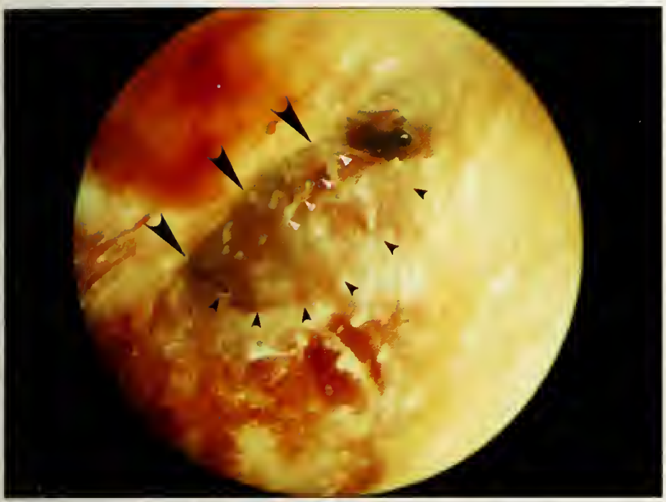

Figure 1

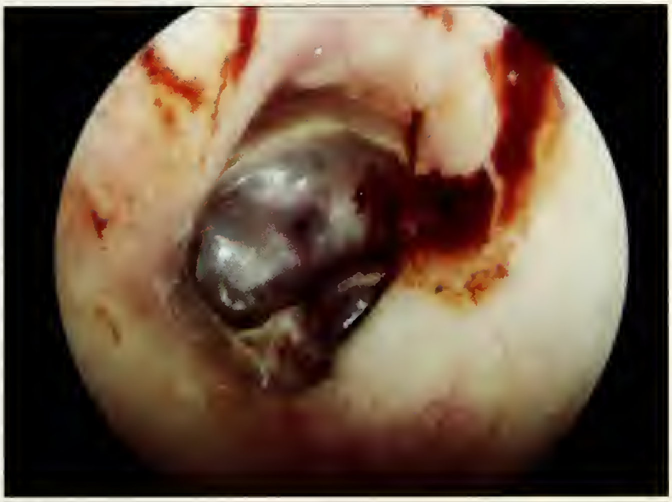

Figure 2

S.L. is a 29-year-old man who presents with a left facial paralysis with an onset over the past three days. He reports decreased hearing A.U. and a draining left ear for several years. Exam of the left ear is shown in Fig. 1 (white arrows indicate position of malleus obscured due to inflammation, large black arrows indicate the anterior canal wall, small black arrows indicate the posterior tympanic membrane annulus). Exam of his right ear is shown in Fig. 2.

What is the etiology of this patient's facial paralysis?

a. Right sided cerebrovascular accident.
b. Left sided cerebrovascular accident.
c. Left ear cholesteatoma.
d. Left labyrinthitis.
e. Bell's palsy.

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER:
c. Left ear cholesteatoma.

The left ear shown in Fig. 1 shows a marked retraction pocket above the malleus. In the depth of this retraction pocket is moist squamous debris emanating from a much deeper cholesteatoma sac which extends into the middle ear and mastoid spaces. The right ear appears to demonstrate a perforation involving the posterior half of the tympanic membrane. In reality this is a cholesteatoma with retraction of the eardrum against the wall of the middle ear which also extends into the mastoid cavity posteriorly. Cholesteatoma is associated with chronic ear disease in which prolonged negative middle ear pressure results in progressive retraction of the tympanic membrane. An actual pocket develops which is the beginning of a larger pocket of retracted eardrum called cholesteatoma. This typically occurs in the pars flaccida area of the tympanic membrane above the malleus or in the posterosuperior quadrant of the tympanic membrane. Commonly, a history of otorrhea and decreased hearing is present but does not necessarily need to occur. This excessively retracted eardrum becomes a progressively larger "sac." Osteolytic enzymes associated with this skin and associated inflammation results in erosion of bone in the middle and inner ear, including the middle ear ossicles, bone encasing the vestibular labyrinth and bone over the facial nerve. This may result in conductive hearing loss, sensorineural hearing loss, and facial paralysis respectively. The thin bone separating the brain from the ear may be eroded leading to meningitis and brain abscess. Cholesteatoma originates with poor eustachian tube function resulting in poor middle ear ventilation. This can be obviated in most instances with timely placement of ventilation tubes. The diagnosis of cholesteatoma should be suspected with any case of otorrhea that fails to clear with a routine course of antibiotics/antibiotic ear drops.

Cerebrovascular accident is one source of facial paralysis that needs to be considered especially in the elderly population. The forehead would be spared in such a paralysis. There are usually other associated neurologic symptoms and signs that make the diagnosis more obvious.

Labyrinthitis refers to an inflammatory process involving the vestibular labyrinth which presents with symptoms of dizziness, nausea and vomiting. Facial paralysis does not occur with this entity.

Bell's palsy is a diagnosis of exclusion representing an idiopathic process. There is some evidence suggesting a viral etiology, especially as its onset often follows a viral upper respiratory infection. Its onset occurs over a 24 hour period and may be associated with pain. A slow onset over weeks to months would suggest a benign or malignant tumor. One necessarily needs to rule out other causes of facial paralysis prior to labeling the patient with this diagnosis (see Table 1). Imaging with CT or MRI to rule out neoplasm would be indicated if paralysis persists greater than six weeks.

Table I. Differential Diagnosis of Facial Paralysis

Congenital
- **Mobius syndrome**

Trauma
- **temporal bone fracture**
- **birth trauma**
- **penetrating facial wound**
- **iatrogenic injury**

Infection
- **herpes zoster oticus**
- **acute suppurative otitis media**
- **chronic otitis media with cholesteatoma**
- **malignant external otitis**
- **tuberculosis**
- **Lyme disease**
- **AIDS**
- **infectious mononucleosis**

Neoplasia
- **middle ear/mastoid tumors**
- **facial nerve schwannoma**
- **temporal bone cancer**
- **parotid cancer**
- **glomus jugulare tumor**
- **acoustic neuroma**

Metabolic
- **diabetes**
- **sarcoid**
- **autoimmune disorders**

Neurologic
- **Guillain-Barre syndrome**

Idiopathic
- **Bell's palsy**
- **Melkersson-Rosenthal syndrome**

Management

This patient needs immediate operative intervention to include tympanomastoidectomy of the left ear due to the associated facial paralysis. He will also eventually require surgical management of the right ear.

With respect to all patients presenting with facial paralysis, if a specific etiology for facial palsy can be determined, this entity should be treated. Traumatic injury to the facial nerve may require surgical exploration, decompression, and possibly reanastamosis of a severed facial nerve.

For Bell's palsy, the use of steroids/acyclovir may be helpful although controversial. Close follow up with repeated electrical stimulation testing of the facial nerve (ENoG) will allow selection of patients with poor prognosis that may be candidates for surgical decompression.

Table 2. Evaluation of Facial Paralysis

History
- onset of palsy
- duration of palsy
- reccurrent palsy
- associated spasm
- medical illness/surgery

Physical Exam
- complete head and neck exam emphasis on otoscopy, oropharynx, parotid region
- neurologic evaluation emphasis on cranial nerves
- assessment of facial palsy complete versus incomplete involvement of selective/all branches of facial nerve

Laboratory Studies
- glucose tolerance test
- audiometry with impedance testing
- electroneuronography (ENoG) - evoked facial EMG
- electromyography (EMG)
- radiographic imaging CT or temporal bone and parotid
- MRI of cerebello-pontine angle, temporal bones and parotid

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St. Louis University

Michelle Eason

It has been an exciting year for SLU. The AMA-MSS officers have worked very hard to regenerate interest in the group. A successful membership drive at the beginning of the year has resulted in a current total membership of 252 students.

The main goals of the past year were to increase membership, increase student participation, and to have a role in the educational policy decision-making and curriculum renewal which is currently underway at SLU. Areas of special interest included computer-based learning and gender equity.

John Lin, a second year student, has been hard at work helping our faculty in both acquiring and developing new computerized learning tools for student use. We have created a computer library that includes textstacks and quiz books for Microbiology, Pathology, Histology, Pharmacology, Anatomy, and the USMLE. We are currently working on making all syllabi, old tests, noteservices, tutorial programs, and memos accessible via home computer, cutting down on printing costs and paper waste.

Our chapter has promoted gender equality through the formation of the Coalition for Women in Medicine, composed of the American Association of Medical College's Women's Liaison Advisory Group (AAMC-WLAG), the American Medical Women's Association (AMWA), and the American Medical Association's Women in Medicine (AMA-WIM). The newly formed coalition has joined forces with women faculty and physicians to address the many issues regarding women in medicine that are important to all medical students, men and women alike. The coalition plans to address the Educational Policy Committee with the goal of compelling the faculty to comply with the University's policy on the use of gender inclusive language in all formal documents, student materials, and speech.

University of Missouri-Columbia

Amir Jalali

This past year was a tremendous recruiting success for our chapter, with 81 of the 96 first year students joining the AMA.

Our focus this year was on the changing face of medicine. MSMA Past President H. Jerry Murrell, MD, spoke to us on the current proposals that the MSMA has developed for the health care reform. Hugh Stephenson, Jr., MD, Chair of the AMA's Council on Medical Education and Liaison Committee for Medical Education, discussed concerns of medical students nationwide. Our chapter also organized a presentation by Conway Jones, MU's financial aid officer, at which over 100 students were informed about possible financial aid changes.

Carrying our concerns about health care reform beyond the local level, our chapter was represented by 13 students at the MSMA Alliance's Legislative Day dinner in Jefferson City. Students, physicians, and spouses were briefed on current issues in the Missouri State Legislature by MSMA lobbyist Tom Holloway, then attended Senate hearings on MSMA's Insurance Market Reform Bill. Recently, several students attended a luncheon with Senator Kit Bond, hosted by the Boone County Medical Society. Senator Bond discussed national health care reform legislation with the group of the physicians and students.

MU is proud to have two students serving on national AMA committees. Sam Hughes, a third year medical student, serves as the student member of the AMA Council on Constitution and Bylaws. Sarah Vogel, also a third year student, serves as the student member of the Liaison Committee for Medical Education. Sarah also wrote a resolution on Bone Marrow Transplantation, which was passed by the AMA-HOD at the Interim meeting in Honolulu.

University of Missouri - K. C.

Ann Bongu

The main goals of our chapter have been to increase membership and participation. During the past year, our AMA membership has grown to over 200 students. We are currently working on more ideas to enhance our recruitment for the next year.

Our members were involved last year as volunteers in free clinics throughout the Kansas City area. We hope to continue this project during the next year.

We are looking forward to the annual AMA-MSS convention in Chicago. Our chapter will be presenting a resolution at the meeting. We are also proud to support one of our members Chris Hinrichs, in his campaign for AMA-MSS Delegate to the AMA-HOD.

Washington University

Kristin Strawhecker

Our chapter has had a busy year. One of our largest success was the development of an Organ Donor Awareness project. First and second year medical students staffed blood pressure booths for members of the community. Whenever someone stopped to have their blood pressure checked, students provided information about organ donation and encouraged people to sign their donation cards and talk to their families.

Also included in the project was lunchtime seminar about organ donation. Several hundred students, residents, and faculty members attended this panel discussion, which highlighted organ donation form the perspective of medical staff, a donor's family, and a recipient.

We also helped co-sponsor National Primary Care Day. This was a two-day event at the Washington University. The first day featured seminars with six different speakers on a variety of topics. The next evening a reception was held for students and primary care physicians.

Another project started by our chapter this year is a Girl Scout Mentorship program. We are currently recruiting interested physicians and medical students to be paired with Girl Scouts so that the Scouts may explore the medical field. We are ready to launch this project full-force next year.

Lastly, we have sponsored two very high-powered speakers. First, the former Surgeon General Jocelyn Elders, MD, came to speak last Fall. Next P. John Seward, MD, Chair of the AMA Board of Trustees, spoke with us about the role of the AMA in medical education and about important legislative issues that are currently affecting medical students.

AMA/Glaxo Achievement Awards

Washington University students were honored at the AMA National Leadership Conference. Chair of the AMA's Board of Trustees P. John Seward, MD, presented the AMA/Glaxo Achievement Awards to 25 medical students and 25 residents.

Robert Puchalski served as the first medical student fellow at the Office of the Surgeon General, after which he arranged for his former boss, Dr. Joycelyn Elders, to address the Missouri medical student population. Over 400 students attended, 103 new AMA Medical Student Section members were recruited, and a previously dormant chapter was reactivated at St. Louis. Mr. Puchalski also organized volunteer recruitment for the successful campaign to reelect Congresswoman Nancy Johnson (R-CT). He is the student MSMA Vice-Councilor, on the Governing Council of the MSMA-MSS, and active in numerous chapter leadership positions.

Julie Miller founded the Washington University Organ Donor Awareness Project and served as Co-Chair for their National Primary Care Day Program. As State Chair of the Missouri Medical Student Section, she has worked to share local projects with other schools to encourage statewide projects, helped reactivate a neighbor school's AMA-MSS chapter, and doubled membership at her own school. Active in local academics, she serves as a tutor for her classmates in several courses, is a mentor in the Minority Health School Research Apprentice Program, serves as class representative to the Curriculum Review Committee, and has been involved in numerous other volunteer initiatives for the National Kidney Foundation.

Nevada Reed has been very active in numerous local community service activities which include: coordinator of the Perinatal Project, a program that matches over 200 volunteer students with underprivileged, single pregnant women to provide labor coaching, prenatal education and support; founder of the Girl Scout Medical Mentorship Program which pairs junior and senior high school girls to physician mentors for a "shadowing" experience; co-coordinator of her chapter's National Primary Care Day activities, sex education and science teacher to high school students, and she is involved in local AMWA activities as well. She is a recipient of the Washington University Distinguished Student Scholarship.

Membership Notes

William H. Gondring, MD, a St. Joseph orthopedic surgeon, has been honored by faculty and fellow alumni of his alma mater and by his community. Dr. Gondring was named an outstanding alumnus of Missouri Western State College in St. Joseph. In addition, the St. Joseph News-Press has named Dr. Gondring to its annual "20 Who Count" panel of St. Joseph area residents cited for their contributions to their community and to their fellow men and women. Dr. Gondring is past president of the Buchanan County Medical Society, and is currently chair of its board of trustees. He is president-elect of the medical staff of Heartland Health System, and chief of surgeons and serves on the hospitals' executive board. He is president of the Mid-America Chapter of the American Red Cross, and has long been active in the Buchanan County Chapter. He is also active with the Missouri Crippled Children's Special Health Needs Clinic, Missouri State Arthritis Advisory Committee, National Arthritis Foundation, St. Joseph 2000 Health Care Task Force, Northwest Missouri Indigent Care Task Force, and Bloodborne Pathogen Task Force, which he currently chairs. Dr. Gondring organized the Croatian Health Care System, St. Joseph group which provides medical aid and support to war-torn Croatia. He has made several trips to Croatia to perform orthopedic surgeries, and has been instrumental in bringing war-injured Croatians and Bosnians from the former Republic of Yugoslavia to St. Joseph for orthopedic treatment. He has also traveled to El Salvador to assist victims of fighting there. Dr. Gondring served with the U.S. Navy in Vietnam, where he performed numerous surgeries. He has been active in organizing mobile military hospitals, and continues to serve in the Navy Reserve, holding a life membership in the Association of Military Surgeons, Naval Institute and Navy League.

Samuel A. Wells Jr., MD, Bixby Professor of Surgery and head of the Department of Surgery at Washington University School of Medicine, has been elected president of the American Surgical Association. Dr. Wells was elected to the post by vote of the orangization's members during the association's annual meeting in Chicago. Dr. Wells is known for his research and clinical expertise in oncology and endocrinology. He has been particularly interested in cancer genetics, and last year he and his collaborators at the School of Medicine developed a genetic test that accurately identifies individuals who have inherited a certain type of thyroid cancer. In 1981, Dr. Wells was named head of the School of Medicine's Department of Surgery. He came to Washington University from Duke University where he was professor of surgery and director of the school's clinical research unit.

He has been a member of the American Surgical Association since 1976. He is a fellow of the American College of Surgeons and serves as vice-chair of its Board of Regents. He is editor-in-chief of the *Journal of the American College of Surgeons*. Dr. Wells has served as president of the Society of Clinical Surgery and the Society of Surgical Oncology. He is a member of the Institute of Medicine of the National Academy of Sciences, and is past chair of the American Board of Surgery and the Residency Review Committee for Surgery. He has received distinguished alumni awards from Duke and Emory medical schools and he is a member of the Johns Hopkins Society of Scholars.

Bernard Becker, MD, professor and emeritus head of the Department of Ophthalmology and Visual Sciences at Washington University School of Medicine, was honored with the dedication of The Bernard Becker Medical Library. Dr. Becker chaired the university committee that oversaw the building's design and construction of the Washington University medical library.

Dr. Becker was recruited as professor and head of ophthalmology at Washington University in 1953. He served as department head through 1988. Dr. Becker is a recipient of numerous academic awards and the author of scientific publications. He is also a collector

Missouri State Medical Association members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

of books. The Becker Collection of rare books on ophthalmology and the visual sciences is a major component of the library's internationally recognized rare book collection.

Dr. Becker has also received two prestigious awards at the annual meeting of the Association for Research in Vision and Ophthalmology (ARVO). He is the second recipient of the Helen Keller Prize for Vision Research, which recognizes excellence demonstrated by significant contributions to vision science during the course of a career. Dr. Becker was also awarded the Mildred Weisenfeld Award for Excellence in Ophthalmology. The award was established by ARVO in 1986 to honor the organizer of the Fight for Sight Research Grant Program.

Sidney G. Christiansen, MD, St. Joseph otolaryngologist, has been elected to the board of directors of Heritage Bank of St. Joseph. Dr. Christiansen is staff surgeon for Heartland Health System, and founding member of a private practice, Head & Neck Surgery Specialists.

Martin B. Wax, MD, associate professor of ophthalmology and visual sciences, is the principal investigator of research identifying a protein that suggests some forms of glaucoma may be an autoimmune disorder. Researchers found that patients with normal pressure glaucoma produced antibodies to a naturally-occurring protein in the retina called rhodopsin. The next step is to look for therapies that might remove the antibodies from the eyes of NPG patients.

IN MEMORIAM

George L. Hawkins Jr., MD, 78, of Creve Coeur, Missouri, died April 6, 1995, of cancer. Dr. Hawkins received his medical degree at Columbia University College of Physicians and Surgeons, New York, in 1941. He served as an intern and general surgery resident at University Hospitals in Cleveland in the early 1940s. He served in the Army Medical Corps from 1944 to 1947 and then completed his neurosurgical residency in 1949 at Washington University Medical Center. Dr. Hawkins practiced as a neurosurgeon in the St. Louis area from the 1940s until his retirement in 1979. He was on staff of several hospitals but worked primarily at St. Luke's and Jewish hospitals. In 1951, Dr. Hawkins became a diplomate of the American Board of Neurological Surgery. He was a past president of the St. Louis Metropolitan Medical Society and the St. Louis Surgical Society.

Theodore C. Kiekhaefer, MD, 61, of St. Joseph, Missouri, died April 7, 1995, of a heart attack. Dr. Kiekhaefer received his medical degree at the University of Nebraska in 1962. He practiced family medicine in Superior and Falls City, Nebraska, before moving to St. Joseph, Missouri in 1978. Dr. Kiekhaefer was director of emergency room at Methodist Medical Center for eight years. In 1985 he started the MedClinic of St. Joseph which currently operates four clinics in the St. Joseph area. Dr. Kiekhaefer recently recertified his boards in the American Academy of Family Practice and has served as a diplomat. He was a diplomat in the American Academy of Disability Evaluating Physicians and a member of the American Association of Occupational and Environmental Medicine. Dr. Kiekhaefer recently received his master's degree in public health from the University of Wisconsin. He was a member of the Buchanan County Medical Society, Ensworth Society, American Medical Association, Phi-Rho-Sigma Medical and Phi Delta Theta fraternities.

Edward H. Klein, MD, 84, of Prairie Village, Kansas, died January 22, 1994. Dr. Klein received his medical degree at the University of Kansas in 1934. He was a Navy veteran of World War II. Dr. Klein was in private practice as a general surgeon in Kansas City, Missouri until his retirement in 1975. He was a member of the Missouri State Medical Association.

Hugh E. Mosbacher, MD, 56, of Lee's Summit, Missouri, died April 29, 1995. Dr. Mosbacher received his medical degree at the Health Center Hospitals, University of Pittsburgh in 1965. He had been in private practice as a Plastic Surgeon in Independence, Missouri, for the past 23 years. Dr. Mosbacher was certified by the American Board of

Continued on page 284

Continued from page 283

Plastic Surgery since 1976. He was a member of the International College of Surgeons, American Society of Plastic and Reconstructive Surgeons, American Society of Aesthetic Plastic Surgery, American College of Surgeons, American Medical Association, Greater Kansas City Medical Society and Charter Member of the Kansas City Plastic Surgery Society. Dr. Mosbacher joined Blue Cross and Blue Shield of Kansas City in 1979. He became chairman in 1983 and served on the Plastic Surgery Peer Review Committee. In 1977 he was President of Medical Staff at the Medical Center of Independence.

Robert Anderson Raich, MD, 63, of Kansas City, Missouri, died March 19, 1995. Dr. Raich was an internist with St. Luke's Hospital Internal Medicine Group. He had practiced in Kansas City since 1962. Dr. Raich received his medical degree at Northwestern University in 1956. He interned at the Montreal General Hospital, Montreal, Quebec, Canada, and the King Edward VII Memorial Hospital, Bermuda, from 1956-1957. He served a third residency in internal medicine at the University of Minnesota, Minneapolis, from 1957-1960. He served two years as Captain in the U.S. Army Medical Corps, stationed at Valley Forge General Hospital, Pennsylvania. Dr. Raich was certified by the American Board of Internal Medicine and the Pulmonary Disease Section of the Board. He was a fellow of the American College of Physicians, a member of the American Medical Association, Missouri State Medical Association, Jackson County Medical Society, American Thoracic Society, a member of the Kansas City Air Pollution Commission and taught residents at St. Luke's Hospital.

Walter L. Stewart, MD, 39, of Columbia, Missouri, died April 5, 1995, at his home. Dr. Stewart received his medical degree at the University of New Mexico in 1986. He was a member of the Boone County Medical Society and the American Medical Association. He completed his residency in internal medicine and in anesthesia at University Hospital and Clinics.

Walter E. Williamson, MD, 95, Midland, Texas, died March 26, 1995. In 1918 he served in World War I. Dr. Williamson received his medical degree at Baylor School of Medicine in 1925. He served internship at Charity Hospital in New Orleans. He practiced in the oil fields of Borger and Iraan, Texas, and settled in St. Louis, Missouri in 1929 to continue practice as an Industrial Surgeon for over 50 years, until he retired in 1975. He was on staff of Missouri Baptist Hospital. During World War II he served three and half years in the U.S. Army Air Corps, stationed in New Guinea and the Philippines. Dr. Williamson was a life member of the St. Louis Metropolitan Medical Society, and a member of the Missouri State Medical Association with a 50 year pin, and the American Medical Association.

AMA Physician's Recognition Awards

The following physicians have completed 150 hours of continuing medical education within a three-year period. Sixty of the credit hours are earned in Category I programs.

Charles J. Ash - Springfield
Glenn A. Barr - Kansas City
Alan E. Bauman - Kansas City
John S. Crie - St. Joseph
Joseph A. DeLucia - West Plains
Gerald L. Early - St. Joseph
Gustavee Eisemann - Kansas City
Fernando Fernandez - St. Joseph
Jerry C. Freeman - Kansas City
Raymond M. Keltner - St. Louis
Lynn H. Kindred - Kansas City
Ernest Lorenc - Springfield
Dominador O. Madrid - St. Louis
Ben D. McCallister - Kansas City
R. Gideon Morrison - Sedalia
D. Glenn Pennington, St. Louis
Kenneth F. Scott - Clinton
Timothy W. Smith - Kansas City
Wilber B. Spalding - Kansas City
Dan T. Sullivan - Springfield
C. Courtney Whitlock - Springfield
Vallee L. Willman - St. Louis
Jerry B. Wurster - Kansas City

Membership Notes

NEW MEMBERS

MSMA

Steven A. Carder, MD - FP
805 Woodridge, Liberty MO 64068
University of Missouri-Columbia; 1992

Jonetta M. Craig, MD - FP
4061 Lindell Blvd., St. Louis MO 63108
University of Iowa; 1986

F. Scott Dattel, MD - PD
9406 E. 63rd St., Raytown MO 64133
University of Kansas; 1992

Edward S. Levy, MD - OBG
6744 Clayton Rd., St. Louis MO 63117
Washington University; 1991

Trevor S. Sutton, MD - AN
660 S. Euclid Ave., St. Louis MO 63110
Univ of Calif San Francisco; 1990

BOONE

Paul D. Bernhardson, MD - PD
N708 HSC One Hospital Dr., Green
Meadows Clinic, Columbia, MO 65212
University of Nebraska; 1985

Stephen A. Dolan, MD - ID
205 Longfellow Ln., Columbia, MO 65203
University of Vermont; 1979

David P. Robinson, MD - PD
1 Hosp Dr., Dept Adolescent Med.,
Columbia MO 65212
Vanderbilt University; 1983

CLAY-PLATTE

Michael J. Krahn, MD - R
2800 Clay Edwards Dr., K. C., MO 64116
University of Missouri-KC; 1986

GREENE

Howard W. Follis, MD - U
1965 S. Fremont #3100,
Springfield MO 65804
Baylor College of Med. Houston; 1995

Terry Winkler, MD - N
3018 S. National, Springfield MO 65804
Louisiana State Univ Shreveport; 1988

JASPER

Michelle A. Boice, MD - OBG
2700 McClelland Blvd., Bldg. C,
Suite 304, Joplin MO 64804
University of Oklahoma; 1990

Raymond K. Gailey, MD - FP
2817 McClelland Blvd., Ste. 214
Joplin, MO 64804
University of Missouri-KC; 1988

Susan O. Pintado, MD - PTH
2700 McClelland Blvd., Joplin MO 64804
LSU Shreveport; 1982

METRO MED OF KANSAS CITY

Susan K. Bonar, MD - ORS
6650 Troost, Ste. 103, K. C., MO 64131
Yale School of Medicine; 1989

Teresa M. Brady, MD - PD
9406 E. 63rd St., Raytown, MO 64133
University of Missouri-Columbia; 1990

Lily A. Silwance, MD - P
11100 Ash, Ste. 106, Leawood, KS 66211
Cairo Univ Cairo Egypt; 1965

Stephen R. Smalley, MD - RO
6400 Prospect, Ste. 240, K. C., MO 64131
University of Missouri-KC; 1979

Arthur D. Snow, Jr., MD - FP
PO Box 7004, Shawnee Mission, KS 66207
University of Kansas; 1975

Mike L. Waldschmidt, MD - GS
118 Westwoods Dr., Liberty, MO 64068
University of Kansas; 1977

MID-MISSOURI

Luther D. Spurlock, MD - FP
1100 W. 10th St., Mercy Medical Group,
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University of Arkansas; 1972

OZARKS

Beverly Epstein, MD - N
600 N. Main St., Mt. Vernon, MO 65712
Far Eastern University Manila,
Philippines; 1988

ST. LOUIS METROPOLITAN

Ricardo Rao, MD - GS
3009 North Ballas Rd #114-B,
St. Louis, MO 63131
St. Louis University; 1987

RESIDENTS

Syed F. Jafri, MD - IM
Mary Ann C. Contogiannis, MD - PS
Laurie A. Goldenberg, MD - FPS
C.B. Boswell, MD - GS
Necat S. Havlioglu, MD - PTH

STUDENTS

St. Louis University
Joseph A. Kohout

The Role of the Physician in the Dynamics of Change Under Managed Care

Tom Bennett, Executive Vice President, MSMS, Inc. and Lewis C. Vollmar, Jr., MD, MBA, MA

The healthcare industry is undergoing tremendous changes primarily due to the pressures being applied by purchasers and consumers to reduce the cost of healthcare. The purchasers of healthcare, namely business and government, are demanding more value for each healthcare dollar, and they are demanding that managed care organizations, hospital systems, insurance companies and physicians modify the way that healthcare services are delivered.

Historical Perspective

In an effort to understand the role that physicians are playing in these changes, it is useful to examine the changes that have occurred in the healthcare environment since the end of WWII.

1940s and 1950s

During these decades the general practitioner was at the center of the healthcare delivery system. In order to expand the quality and quantity of healtcare services, the federal government provided funding for the building of medical schools and, through the Hill Burton Act, for the construction of hospitals throughout the country.

1960s

The most significant event of the decade was the enactment of Medicare and Medicaid. These acts provided for a cost based system of reimbursement for healthcare services, which caused an increase in physician income and a shift to relatively expensive hospital based care.

1970s

Hospitals continued to expand into the suburbs. The rise of the specialist (and the concurrent decline of the general practitioner) along with the medical technology boom drove medical costs steadily upward. All of this was paid for by a rapid growth of commerical insurance for hospital services.

1980s

Government attempts at voluntary cost controls were largely unsuccessful. Therefore, involuntary cost controls were mandated with the passage of TEFRA and the use of DRGs, heralding the beginning of prospective payment for inpatient hospital services. In the private sector, managed care organizations began to be used in a big way to curtail costs by hospitals and providers. In response, hospitals began to group into "systems" to centralize services and reduce costs.

1990s

The first half of this decade saw and ongoing consolidation of hospital systems and managed care organizations. Their dominance in the healthcare environment allowed them to amass huge cash reserves. Their position of power caused the development of adversarial relationships between physicians and hospital administration and between physicians and managed care organizations. Business coalitions and purchasing cooperative arose to control the cost of healthcare, and the government has steadily reduced reimbursments for healthcare. Caught on the receiving end of allof this pressure, physicians saw a channelling of patients away from their practices, the unethical use of withholds to motivate physicians not to provide care, and a general erosion of the physician's control over the management of patient care.

Today

The most significant changes that are taking place today in the delivery of healthcare are the following:

- There is a rapid movement away from expensive, bureacratic hospital centered services to less costly, more flexible, physician directed, community based care. Indeed, it is estimated that over 70% of healthcare can be provided outside the traditional hospital campus. Ironically, the consolidation of hospital systems continues with a vengeance throughout the nation. In the state of Missouri, there are megalithic hopsital systems being built in St. Louis (BJC, Unity and SSM), Kansas City (HCA/Columbia, Health Midwest and Health First, Springfield (Cox and Mercy), Joplin (Mercy and Freeman), and St. Joseph (Heartland). Although these systems have enormous financial resources, they lack the essential ingredient for the delivery of healthcare, namely the physicians! Consequently, hospital systems are attempting to purchase and control physician practices.

- Ancillary care providers feel quite threatened by the hospital systems' aggressive attempts to purchase and control physicians and thereby to provide all ancillary services in house. If this trend continues they will lose most of their market share. Therefore, ancillary providers want physicians to remain independent of hospital systems, but well organized and well managed. And to see that this occurs, ancillary care providers are taking an active role by becoming capital partners with physicians groups that are organizing themselves. Both Coram, the largest infustion of respiratory therapy company in the USA, and Olsten/Beverly, the largest home care provider, are prepared to pump millions of dollars into these nascent physician organizations.

- Business is getting smarter and demading more accountability. In order to control the cost of heatlhcare, business leaders are demanding change and exacting cost concessions from healthcare providers and intermediaries, and questioning the high administrative cost and profits that are made by HMOs, insurance companies and hospitals. While giant firms like Xerox, Honeywell and Procter & Gamble are albe challenge healthcare costs directly, other businesses have been forming coalitions througout to do the same. There are now 150 business coalitions throughout the country that are active in purchasing healthcare for their employees.

  Business healthcare purchasers have also become more intelligent in how they purchase healthcare services. "Smart purchasing" now mimics the procurement practice of business. Purchasing decisions are made through a competitive bidding process that is initiated by submitting specifications of a well-defined service. Quality is then measured against those specifications. An example of a prudent purchaser is Honeywell Corporation. It has determined that three major areas must be included in provider contracts including the definition of quality, utilization review and case management.[1] By accumulating good clinical outcome and cost data, Honeywell has been able to focus on quality. This comapny has also advocated the use of case management rather than the gatekeeper, the accountability of their employees for their own health, and the importance of education and prevention.

- The federal and state governments are making plans to reduce their expenditures on Medicare and Medicaid. States are applying for and being granted Medicaid waivers for managed care. Riskcontracts under Medicare are being sought by all major managed care organizations. Rodney Armstead, director of HCFAs Office of Managed Care has stated, " Our projection for the growth of Medicare risk plans in 1995 is 20% to 25%." Both the Republican and Democratic leadership are aggressively touting the use of managed care as a major factor in balancing the federal budget.

- Physician practice management firms are growing at a rapid rate. These companies are creating "virtual systems" wherein they manage a large network of physician providers and have established networks of ancillary providers, surgical centers, imaging centers and the like. Hospital beds are leased on the "spot" market. In essence these "virtual systems" can do what hospital systems wish to do without having the liability of owning and operating large facili-

Continued on page 288

Continued on page 287

ties. The largest management firms. Coastal, PhyCor and Pacific Services, are racking up annual earnings growth of greater than 30%. As a group, practice management firms are perhaps the fastest growing segment in the healthcare industry with current total annual revenues of $24 billion that are growing at a compound rate of 15% per annum.[2]

■ In the present economic healthcare exchange the physicians, who are the suppliers or providers of services, are not actively engaged in the exchange, and historically the purchasers of healthcare services, business and government, have delegated their purchasing authority to third party intermediaries. The ultimate consumer of services, i.e. the patient has witnessed his or her choices greatly restricted under managed care.

The present forces that are at work within the medical marketplace that impact the economic exchange include:

- Purchasers of services
    - Federal government
    - State government
    - Local government
    - Business
    - Private payors
- Consumers of care: Patients
- Providers of Services
    - Physicians
    - Ancillary providers
- Intermediaries
    - Insurance companies
    - Managed Care Organizations
    - Third Party Administrators
    - Brokers
    - Hospitals

Under managed care physicians will have the opportunity to manage budgets that were once the prerogative of hospitals and managed care organizations. Why should physicians be satisfied with capitation rates of $8.50 per member per month (P.M.P.M.) for primary care, when they will be able to contract for all of the non-hospital services at rates of $150 P.M.P.M.? Revenues for 10,000 lives at capitation rates of $8.50 P.M.P.M. realize revenues of $1,020,000 per annum. On capitation rates of $150 P.M.P.M. revenues would total **$15,000,000.** There is, of course, a great amount of **RISK** associated with these contracts, however, there are enormous financial rewards that physicians can accrue if the budget is well managed. Even some of the risk can be shared with ancillary providers.

Beyond 1995

Forecasting into the future one can expect to see the following:

- Physician will become much better organized and better managed. Capital for this organization will become more readily available through ancillary providers and other capital partners. With the infusion of capital, physician-directed, community-based healthcare delivery models will not only survive but thrive.

- Hospitals will be faced with the liability of too many beds and too much overhead. In an attempt to control market share, hospitals will begin to evolve into insurance and managed care entities and push existing insurance companies and managed care organizations out of the market. However, they will be unable to control or buy a sufficient number of physicians and their power will begin to erode.

- The movement away from the hospital-centered medical care to community-based care will increase exponentially. The delivery system will be increasingly controlled by groups of well-organized physicians.

- Purchasers of care will become better informed through data. They will judge providers bay performance and outcomes.

- Managed care will be based on medical models rather than purely economic models. The emphasis will be on case management rather than gatekeeper systems.

- Primary care physicians will take on a more important role in the delivery of healthcare, yet primary care physicians and specialists will collaborate, not compete.

The "Jackson Hole Group," an informal think-tank of healthcare leaders proposed a number of initiatives for the re-engineering of healthcare delivery in the U.S. The initiatives include:

- The reformed system must be based on organizations that integrate the financial, clinical and managerial and preventive aspects of healthcare, that are publicly accountable for their cost, health outcomes produced and patient satisfaction. We refer to them as "Accountable Health Partnerships." Such organizations would replace the traditional fee-for-service fragmented practice, remote third party intermediary model.

- These organizations must be made to compete on value for money for the custom of well-informed, price conscious consumers in a restructured market design and manage to counteract important sources of market failure. A market oriented regulatory framework is needed to assure the supply of information necessary for uniform health outcome accountability, and to oversee the functioning of the competitive markets.

- The demand side of this market, now fragmented and ill-informed, must also be empowered and restructured with appropriate incentives. Small employment groups must be pooled into purchasing cooperatives that are large enough to spread risk, achieve economies of scale, offer choice of plan at the individual subscriber level, and manage competition effectively. Tax code changes limit public subsidies to the cost of economical health plans.

- An authoritative public body and process must make collective determinations of which health services should be included in the uniform basic health benefit coverage. Such determinations should be based on outcomes research and judgement about value for money, not political influence.

- There should be universal coverage of these uniform basic health benefits through "Accountable Health Partnerships."[4]

Conclusion

Managed care and risk contracting are here to stay. Under managed care, physicians will have a "golden" opportunity to manage budgets that were once the prerogative of hospitals and managed care organizations. Physicians are meeting this challenge in Florida, New York, New Jersey, Pennsylvania, California, Oklahoma, Kansas, Missouri, North Carolina, Washington and Virginia by organizing PPOs, IPAs, HMOs and POs.[3]

A new generation of managed care is now evolving, one that is a medical model of healthcare delivery rather than the present economic model. This new generation of managed care will emphasize:

- ▼ The need to manage care, not just cost.
- ▼ Health maintenance rather than episodic, short-term care for acute illnesses.
- ▼ The role of the physician as care manager rather than gatekeeper.
- ▼ Collaboration between primary physicians and specialists.
- ▼ Rewards based on outcomes and good judgement.

In summary this new generation of managed care will give the physician the opportunity to radically reform the delivery of healthcare, improve access and availability and control the cost and quality of patient care. It will also reinstate the physician as patient advocate, patient care manager, leader and policy maker.

The systems that will ultimately succeed will be those systems that are patient focused, physician directed, well capitalized, well organized and well managed multi-specialty networks which have partnered with ancillary providers and businesses.

> *"The mind once expanded to the dimensions of a larger idea never returns to its original size."*
> **- Oliver Wendell Holmes**

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3. Jaklevic M. *Modern Healthcare*, April 1995, p. 63.
4. Ellwood et al. The Jackson Hole Initiatives for the Twenty-First Century American Healthcare System *Health Economics*, 1992, p. 149-150.

Recommended Reading:

Making Managed Healthcare Work, Peter Boland, Aspen Publications, 1993. **MoMed**

Can American Democracy and the Profession of Medicine Survive The Giant Managed Care Oligopolies?

Justice Louis D. Brandeis and "The Curse of Bigness"

Arthur H. Gale, MD,

As health system reform proceeds in the marketplace, the insurance companies grow larger and larger, securing ever greater economic and political power.

The founders of our nation knew well the lessons of history-that the uncontrolled concentration of power always leads to abuse. They fashioned a Constitution with checks and balances and separation of powers which prevent government from usurping the liberties of a free people. But the founders never addressed the problem of the concentration of power in the hands of large corporations because mega-corporations simply did not exist at that time. The American economy at the time that the Constitution was written was mainly agrarian.

After the Civil War, in the late 19th and early 20th centuries with the Industrial Revolution in full swing, corporations or trusts as they were called at that time grew to enormous size. They were controlled by a small number of financiers who often served on interlocking directorates.

There were many leaders in government and society at large who viewed oligopolies (the concentration of economic and political power in the hands of a few) as a threat to American democracy. The most outspoken and influential opponent of trusts and the threat they posed to a democratic society was Justice Louis D. Brandeis (1856-1941). He wrote a famous essay on the trusts entitled "The Curse of Bigness." He fought the trusts in the courts and was involved in the creation of the Federal Trade Commission (FTC) and the Clayton Anti-Trust Act.

Brandeis criticized the trusts for four major reasons. One, they held too much concentrated power; two, they were inefficient; three, they were responsible for the deterioration of quality; and four, they did not permit the development of free, autonomous individuals who were so necessary for the maintenance of democracy.

Let us examine each of these items with reference to the managed care mega insurance companies.

1) The concentration of corporate power in Brandeis' time was enormous. Today in the health care sector of our economy, we see a similar pattern of concentration of wealth and power. Best Insurance Report (Life-Health 1993) showed the following net worth of the five largest insurance companies:

Prudential	**154.1 billion**
Met Life	**118.1 billion**
Aetna	**67.1 billion**
Cigna	**47.1 billion**
Travelers	**34.2 billion**

The assets of these insurance companies equal or exceed the GDP of many nations.

These insurance companies not only wield economic power, they wield political power. One has to look no further than the recent events which took place in the Missouri State legislature. When the Missouri State Medical Association (MSMA) introduced a bill regulating the quality of care delivered by the insurance industry, (The Patient Fairness Act), the insurance industry and their big business patrons sent an "army" of lobbyists to Jefferson City. This bill passed handily in the Senate. It had a reasonable chance of passing in the House, but it never came out of committee in the House because the insurance industry controlled the committee to which it was referred. These well-heeled lobbyists contribute not only to the election campaigns of legislators, but they have the resources to offer jobs to legislators and their families. Is it any wonder that the average American is cynical about government? Some political scientists and pundits describe our government as a "cashocracy," not a democracy, because the power of the special interests has destroyed the one man, one vote concept which is so essential to the maintenance of our democracy.

2) The inefficiency of large corporations. Brandeis held that huge size of corporations produced inefficiency. Because of his corporate law practice, he had firsthand knowledge of the financing of the trusts. He knew about the dark side of corporate finance. He knew how corporate managers manipulated figures to show increased shareholder profits. He knew about the waste, inefficiency and corruption that can occur in trusts.

Economists have roundly criticized Brandeis for his economic views on bigness. They think that as an economist Brandeis was naive despite his mastery of the most intricate accounting data in corporate finance.

Economists believe that bigness by virtue of vertical integration and economy of scale (sound familiar?) is efficient because it produces low prices for the consumer. Economists hold that Brandeis failed to distinguish between *central industries* like automobiles, steel and chemicals and *peripheral industries* like furniture, lumber and apparel manufacturing. The former by their nature always develop into

Continued on page 292

Justice Louis D. Brandeis
(Brandeis University Archives)

Justice Louis D. Brandeis is sometimes referred to as the Thomas Jefferson of industrial democracy. The young Brandeis bore a close physical resemblance to Lincoln, according to persons who knew both men. His colleagues on the Supreme Court and President Woodrow Wilson referred to him in conversation as "Isaiah" after the Old Testament prophet. Brandeis' beliefs and actions were in keeping with the principles of individual freedom and equality held by all three of these individuals.

Brandeis was well qualified to understand the inner workings of corporations. He had firsthand knowledge as an eminently successful corporation lawyer. His uniqueness lay in the fact that, despite representing the rich and powerful, he had a strong social conscience. After becoming wealthy from his law practice, he came to champion the cause of the working man. He won a landmark case obtaining shorter working hours for employees. He successfully battled the President of the United States, William Howard Taft, and one of his Cabinet members on an issue of granting mineral rights in Alaska. Because of his advocacy of the public interest and the rights of the common citizen, he became known as the people's lawyer. He never accepted a fee for his work in this area of the law.

His greatest accomplishments, however, were in his opposition to, and the regulation of the giant monopolies or trusts which existed in the early decades of this century. Although he was quite popular with the public, he developed many powerful enemies in corporate America. When he was nominated for the United States Supreme Court by President Woodrow Wilson, no less than seven former presidents of the American Bar Association, including a previous President of the United States, William Howard Taft, wrote letters opposing the nomination, describing him as morally unfit for the job. His nomination to the Supreme Court was confirmed despite this formidable opposition.

Brandeis' comments on the threats to democracy of the trust are germane to the mega for-profit HMOs which have mushroomed across the face of our nation in the past few years.

Continued from page 291

huge vertically integrated industries, whereas the latter have never evolved in that manner.

The medical industry has traditionally been a cottage industry-with a few notable exceptions like Kaiser Permanante. In the present evolving medical marketplace, economists, business school professors, and public policy makers are forcing vertical integration and economy of scale on the health care industry through managed care HMOs. Their rationale is that the medical care industry is a *central industry* not a *peripheral industry*. But the basic assumption that large HMOs whether vertically integrated or not, are economical may be fallacious. Consider the following:

1. The 1984 Puget Sound/Rand Study, the last double blind randomized, controlled study comparing the cost of fee-for-service and HMOs, showed the HMOs were not less expensive than fee-for-service plans with modest cost sharing.

2. The 1993 exhaustive General Accounting Office (GAO) review of all studies comparing HMOs and traditional insurance concluded that there was no scientific evidence that HMOs were less expensive than traditional insurance plans.

3. In 1994, two independent studies, one by the Mathematica Corporation and one by the GAO showed that HMOs were actually more expensive than traditional insurance in the Medicare population.

4. Joseph Newhouse, a Harvard economist, reported in *Health Affairs* (Winter, 1994) that the per capita growth rate of health care in this country has remained relatively steady over through 1993. The average growth rate per capita is 3-4%. This is in contrast to the reports that premiums charged to business have not increased significantly over the past few years due to the introduction of managed care. For a variety of reasons, Newhouse says that the data provided by big business is not an adequate indicator of the facts. Employers have cut benefits; employees are a healthier population; and, furthermore, 40% of health care financing is public.

The high administrative costs of HMOs also contribute to waste. In California, *A.M. News* (5/15/95) reports that administrative costs of private HMOs for Medicaid patients were much greater than the administrative costs for the state. HMO costs were 16% on an average, and state administrative costs were 2%. Salaries for HMO administrators have soared out of sight. On a national level, cash and stock dividends to the CEOs of the seven biggest for-profit HMOs averaged $7 million last year.

Administrative costs for HMOs across the United States range from 27.1% (U.S. Health Care) to 16.5% (Pacific Care Health Systems.)" These facts, contrary to the views of the economists, business school professors, and public policy experts, attest to Brandeis' theories that bigness does not always produce efficiency.

3) Brandeis believed that the third major problem of bigness was that it usually resulted in deterioration of quality. According to one political scientist, trusts at the turn of the century were perceived something akin to "acts of God." Their existence was though by many to be "inevitable and good."

Today, HMO operators hype consolidation and integrations as a means of lowering price and improving quality, just as the steel and railroad magnates of Brandeis' time claimed for their industries. Were he alive, Brandeis probably would not buy the arguments of today's HMO operators any more than he bought the arguments of big business 80 years ago. With an uncanny talent for analyzing corporate financial statements, and by refusing to accept uncritically the data presented by big business, Brandeis demonstrated how trusts ossified, suppressed competition, stifled innovation and ended up producing poor quality products at higher prices. A recent example of this phenomenon is the U.S. auto industry prior to the introduction of foreign competition.

The HMOs pride themselves on the quality of care they deliver. They have their own quality assurance organization called the National Committee on Quality Assurance. The NCQA is not a truly independent organization; it is run by the trade association which it is supposed to regulate. The AMA selects one member who serves on the NCQA board.

Other quality indicators for HMOs are that they check the charts for content and legibility. They encourage preventative health programs in order to prevent serious costly illnesses from developing, and in order to further enhance their image of quality, HMOs send out surveys which usually conclude that 90-95% of their enrollees are happy with their HMOs and happy with their physicians. I have no quarrel with these activities. They are activities which physicians have always engaged in and are nothing new. But basically they are screening types of activities.

But what happens if a patient develops a costly and serious illness, the kind of illness that many of us were trained to treat? That's when the managed care HMOs can become downright nasty.

About 65% of all employees in the United States are covered under the federal Employee Retirement Income Security Act (ERISA). State insurance commissions have no jurisdiction over these plans and, because the ERISA law was poorly written, neither does the federal government. So it turns out that ERISA plans, which are basically synonymous with the large for-profit HMOs, are not accountable for poor medical practices to anyone. History shows what that always leads to.

It is no surprise then that the National Association of Insurance Commissioners issued a white paper in March, 1995, which called for ERISA reform. In their conclusion, they stated the following: "The diverse facts of ERISA's failure to protect the interests of health care consumers are widely reported frequently as isolated incidents. The large number of reported cases, thousands of complaints, hundreds of media stories, document the hurt and despair of many individuals.

The same white paper contained the words of the judge who heard the Corcoran case where a woman with complications of pregnancy was sent home, against the advice of her obstetrician, by the utilization review board of a large HMO. While the mother was at home, the fetus developed distress and died. Corcoran sued the insurance company, but could not obtain redress of her grievance under ERISA law. The judge, in acknowledging the injustice of his own opinion, had the following to say about ERISA (and about the utilization review committees of the for-profit HMOs which are covered under the ERISA law):

> [ERISA] REMOVES AN IMPORTANT CHECK ON THE THOUSANDS OF MEDICAL DECISIONS ROUTINELY MADE IN THE BURGEONING UTILIZATION REVIEW SYSTEM . . . THERE IS NO DETERRENCE FOR SUBSTANDARD MEDICAL DECISION-MAKING . . . BAD MEDICAL JUDGEMENTS WILL END UP BEING COST-FREE . . . ERISA PLANS WILL HAVE ONE LESS INCENTIVE TO SEEK OUT THE COMPANY THAT CAN DELIVER BOTH HIGH QUALITY SERVICES AND REASONABLE PRICES.

These are strong words. The dire predictions of the judge have come to pass in California. The California Medical Association (CMA) and consumer organizations have introduced a record 80 bills trying to regulate managed care companies. A spokesperson for the CMA said, (*A.M. News*, May 8, 1995), "We see a cumulative effect of thousands of patients who have been suffering and fighting the system without any rights. Consumer outcry has really come to a head." Two high-profile judgements may have contributed to this public outcry. One was an $89.3 million jury award last year to the family of a patient who was refused by an HMO, the cost of covering an autologous bone marrow transplant to treat her breast cancer. The other was a $500,000 fine levied by the state in 1994 against another California HMO for refusing to provide a pediatric surgical specialist for a young girl diagnosed with Wilms' tumor.

When we talk about quality of care, whom are we to believe-on the one hand the large managed care companies or on the other hand the National Association of Insurance Commissioners, the courts, the California Medical Association and consumer groups? In one scenario, one of the parties must not be telling the truth. The reader may decide for himself or herself who that party is.

In another scenario, it is possible that all parties to this dispute are correct. How is this possible? It is estimated that in the U.S., 5-10% of the population consumes 50% of medical resources. When managed care insurance companies' surveys show that 90-95% of their members are happy with their plan, the conclusion may be true. The 90-95% who are happy with their HMO may be the ones who do not have serious illness. The 5-10% who are unhappy may, for the most part, be patients who have serious and costly illnesses. The state insurance commissioners, the courts, the CMA, and the consumer organizations are mainly up in arms over patients with serious illnesses who

Continued on page 294

Continued from page 293

were denied treatment or mistreated by the HMOs.

If managed care were required to care for all the genuinely sick patients we see in our practices and if they were made accountable to the American public through the courts by repeal of ERISA, in my opinion much of their so-called cost savings would evaporate.

4) Brandeis' fourth major objection to big business was that it deprived citizens of liberty or "manhood" as he called it. By manhood, Brandeis meant a free autonomous human being. Brandeis believed that democracy is fragile and cannot survive if its citizens are not free.

Brandeis' statements on freedom may sound a bit corny to some readers, but let's look at what's happened to freedom for employees and physicians under managed care.

Employers herd their employees like cattle into HMOs. Employees often lose the freedom to choose their own doctors with whom they have built a relationship over many years. They may be forced to change physicians every year or two because their employer chooses a different plan for economic reasons. They often cannot see the specialists of their choice. They certainly cannot see any specialist without first getting approval of a primary care "gatekeeper." Even the specialists on the list approved by the employer's HMO may not be available to the employee because the gatekeeper's withhold may be affected unless he sends patients to a certain group of specialists who are credentialed as "economically more efficient." When the patient goes to a primary care physician and needs an EKG, chest x-ray or laboratory blood test, he or she must traipse all over the city-sometimes in bad weather-to obtain tests that they could have more conveniently obtained in their physician's office. A small, but significant, number of patients (10-20% - no one really knows how many) simply never obtain these because of the hassles involved. The HMO manager mandate these rules in the name of "Efficiency."

If the patients are denied freedom of choice and must do what they are told, physicians are not much better off. In order to be accepted by the HMO, physicians must sign a "hold harmless" agreement. They must relieve the managed care organization of liability, even though the managed care organization may directly micromanage and interfere with physician decision-making. HMOs often require physicians to sign "gag orders," prohibiting them from saying negative things about the operating practices of the plan, and physicians must promise not to recommend other physicians in rival organizations. If, because of their conscience physicians do speak negatively about the practices of the plan, they can be kicked out or as it is euphemistically terms, deselected. One can only wonder who the doctor is working for-the patient or the insurance company.

Doctors today are working in a climate of fear. An atmosphere of corporate "big brotherism" prevails. Brandeis was right-people working in such an environment will not develop the necessary liberties which a democracy requires. They will simply do what the are told. Witness the "efficient" totalitarian regimes in Germany, Japan, Italy and Russia in the 1930s and 1940s.

When one considers all of the potentially harmful effects of corporate bigness, is it really worthwhile for the U.S. to embark on the managed care experiment which is being forced down the throats of the American public and the medical profession? Even if there are some small cost savings, is it worth the effort?

No one has given a more eloquent answer to this question than Louis D. Brandeis. In his testimony before the Senate committee on Interstate Commerce in 1911 Brandeis spoke the following words:

> *"The ill effects of bigness weigh heavily on both men and things. By their by-products shall ye know the trusts. Study them, through the spectacles of people's rights and people's interests . . . when you do that you will realize the extraordinary perils to our institutions which attend the trust . . . Aside from whether a corporation has exceeded the power of 'greatest economic efficiency' or not, it may be too large to be tolerated among the people who desire to be free."* MoMed

Missouri HMO Update

1994 Operations Data*

	Missouri Only				Nationwide			
	Member Members	Avg. Months	Premium	Revenue	Revenue	Med. Exp.	Admin. Exp.	Net Income
BMA Selectcare, Inc.	3,468	39,585	$ 796	$ 2,626,172	$ 8,929,188	77%	20%	$ 231,143
CIGNA Healthplan of KS / MO	2,441	26,868	2,733	6,119,588	54,169,139	72%	28%	(4,653,980)
CIGNA Healthplan of St. Louis	5,485	66,627	1,636	9,083,850	19,871,005	51%	40%	1,013,539
Exclusive Healthcare (KC)	3,712	42,650	1,449	5,151,670	52,893,471	96%	14%	(4,804,248)
Gencare Health Systems	182,944	2,023,789	1,312	221,193,136	246,070,601	77%	10%	22,350,318
Good Health (BlueCare)	14,028	179,923	1,482	22,224,399	27,699,209	66%	9%	4,315,792
Group Health	88,586	1,067,814	1,629	144,958,263	200,890,738	87%	12%	426,177
HealthLink	5,263	44,573	1,123	4,169,520	4,337,848	83%	32%	(684,119)
HealthNet	1,570	18,064	1,404	2,112,953	6,236,896	82%	54%	(2,101,896)
HealthSource (BlueAdvantage)	21,586	232,455	1,504	29,137,174	45,952,985	88%	11%	539,231
HMO Missouri (Bluechoice)	60,149	675,122	1,534	86,311,606	95,224,175	70%	16%	8,542,394
Humana Health Plan	6,204	48,660	1,372	5,561,712	915,890,430	82%	13%	21,483,444
Humana Kansas City	57,337	675,541	2,008	113,024,354	170,349,760	84%	13%	3,151,347
Kaiser of KC	27,853	334,590	1,531	42,701,736	70,104,239	79%	19%	863,446
Metlife Healthcare (St. Louis)	28,489	338,611	1,637	46,201,014	47,913,942	75%	16%	2,476,918
Metlife of KC	4,106	46,559	1,475	5,721,334	10,189,962	85%	16%	(52,543)
Partners	41,314	495,425	1,458	60,190,036	60,896,284	86%	12%	1,447,863
PHP of Greater St. Louis	127,942	1,326,146	1,350	149,140,613	150,553,421	81%	17%	1,577,734
Principal of KC	16,171	300,977	957	23,997,593	42,749,840	76%	21%	685,626
Prudential (Prucare of KC)	26,545	289,467	1,372	33,105,544	1,816,523,500	83%	15%	74,670,641
Total Health Care	27,601	328,558	2,248	61,552,109	88,314,767	71%	10%	16,859,499
Truman Medical Center	15,069	180,218	803	12,054,050	157,201,868	72%	15%	20,979,038
	767,863							

Lowest Medical Expenses as a Percentage of Revenue*

1.	CIGNA Healthplan of St. Louis	51%
2.	Good Health (BlueCare)	66%
3.	HMO Missouri (Bluechoice)	70%
4.	Total Health Care	71%
5.	Truman Medical Center	72%
6.	CIGNA Healthplan of KS / MO	72%
7.	Metlife Healthcare (St. Louis)	75%
8.	Principal of KC	76%
9.	BMA Selectcare, Inc.	77%
10.	Gencare Health Systems	77%
11.	Kaiser of KC	79%
12.	PHP of Greater St. Louis	81%

Highest Net Incomes of HMOs Operating in Missouri*

1.	Prudential (Prucare of KC)	$74,670,641
2.	Gencare Health Systems	22,350,318
3.	Humana Health Plan	21,483,444
4.	Truman Medical Center	20,979,038
5.	Total Health Care	16,859,499
6.	HMO Missouri (Bluechoice)	8,542,394
7.	Good Health (BlueCare)	4,315,792
8.	Humana Kansas City	3,151,347
9.	Metlife Healthcare (St.L)	2,476,918
10.	PHP of Greater St. Louis	1,577,734
11.	Partners	1,447,863
12.	CIGNA Healthplan of St. Louis	1,013,539

**Source: Missouri Department of Insurance*

Dear Editor:

I am writing in regards to an article in the February issue of *Missouri Medicine*. The article is entitled, "Osteochondroma of the Scapula," and was written by Drs. Galate, Blue and Gaines.

There is an error which is on page 97. The authors refer to multiple hereditary osteochondromas as Ollier's disease. In fact, multiple hereditary osteochondromatosis, multiple hereditary exotosis, or multiple cartilaginous exotosis does not carry an eponym.

It has been described and named in various manner by Drs. Keith, Ehrenfried, and Jaffe, the latter of which proposed the term multiple hereditary exostosis. Ollier's disease is actually multiple enchondromatosis. A sentence from Tachdjian's *Pediatric Orthopaedics*, 2nd edition, Vol. 2, page 1172, W.B. Saunders, 1990, sums it up best and is as follows: Hereditary deforming chondrodysplasia (another name for multiple hereditary osteochondromatosis) was the name proposed by Ehrenfried, but its use was subsequently discouraged because of confusion with Ollier's dyschondroplasia (multiple enchondromatosis).

I thought this error should be pointed out so no confusion would exist. Of note, Dr. Thomas Schmidt and myself recently removed a scapular osteochondroma whose dimensions were approximately 5 x 3 x 3 cm. Thank you for your time.

Sincerely,
Daniel W. Vande Lune, MD
Kansas City

Valproic Toxicity With Fluoxetine Therapy

Salvador Cruz-Flores, MD, Ghazala R. Hayat, MD and Waqar Mirza, MD,
from the Department of Neurology, Saint Louis University Health Sciences Center

It is well known that fluoxetine blocks enzymatic degradation of tricyclic antidepressants,[1-3] carbamazepine,[4] and diazepam.[5] The potential interaction between fluoxetine and valproic acid has also been reported.[6] We report a case that supports the interaction between fluoxetine and valproic acid.

The patient was a 17-year-old man with a history of complex partial with secondarily generalized seizures emanating from both temporal lobes independently. He had static hypoxic encephalopathy since the age of 5 months. The patient had been on multiple antiepileptic drugs, mostly polytherapy, with poor seizure control. Three months prior to this admission the patient was on valproic acid 750 mg am, 625 mg noon, 625 mg 5:00 pm, and 625 mg at bedtime, and Felbamate 800 mg am, 400 mg noon and 800 mg at bedtime. He was seizure free for three months. His valproic and trough level ranged between 100-110 MCG/ML (nl 50-100 MCG/ML).

Two weeks prior to admission to the hospital the patient was started on fluoxetine 20 mg/day for behavioral problems which led to the diagnosis of depression. He was brought to the emergency room because of a two-day history of drowsiness and difficulty being aroused. The patient denied any history of fever, addition of any other drug or trauma.

Upon admission he was noted to be lethargic. Vital signs were stable, and his general examination was normal. He was oriented to name and place only. He could recall only 1/3 objects after five minutes. His reflexes were brisk with plantar responses. His CBC differential serum sodium, BUN, ammonia and amylase levels were normal. CT-scan of the head was normal. Electroencephalogram showed generalized slowing with no evidence of status epilepticus. His valproic acid level was 141 MCG/ML. The valproic acid dose was decreased by 400 mg/day to 2375 mg/day. Over the next two days the patient's level of consciousness improved to baseline. His new valproic acidtrough level was 110 MCG/ML. As the patient had responded well to fluoxetine, he was kept on the same dosage.

Sovner suggested a drug interaction between fluoxetine and valproic acid and postulated that the interference with the hepatic metabolism of valproic acid derivatives was the cause for this interaction.[7] Corrigan et al. described two cases who were treated with fluoxetine for depression and later valproic acid was added. Both patients responded favorably with improvement in mood disorder.[5]

The effect was thought to be an augmenting effect of valproic acid on the specific serotonin reuptake inhibition of fluoxetine. Fluoxetine has been shown to suppress sleep in the rats which is probably related to response of pre-synaptic receptor to increased amounts of transmitter. This was also shown with 5-HT_{1A} and 5-HT_{1B} receptor agonists in animal models.[8]

The interaction and augmenting effect of valproic acid and fluoextine causes different side effects. The augmentation at the pre-synaptic level may lead to suppression of sleep while possible interference with hepatic metabolisms can lead to valproic acid toxicity, causing somnolence.

Our case, even though different from that reported by Sovner[6] in regards to the indication for use of valproic acid and the definitive presence of symptoms of toxicity, strongly supports the presence of interaction between valproic acid and fluoxetine. As the patient's sensorium improved with reduction in valproic acid level and later he was stable, it is less likely that Felbamate had caused drug interaction. Interestingly enough, our patient's symptoms of somnolence also started two weeks after initiating fluoxetine therapy. Although Sovner's patient was not lethargic/somnolent, patients can experience this side effect with high valproic acid trough levels. It would be necessary to consider the measurements of valproic acid trough levels serially in patients taking these medications concomitantly in the clinical practice. In addition, it is necessary to develop studies of drug interaction between these two medications.

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Rare Primary Signet Ring Carcinoma of the Pancreas

Carole P. McArthur, MD, PhD, Russell Fiorella MD and B. M. Saran, MD

Signet ring carcinoma of the pancreas is a rare mucin-producing variant occurring in less than 1% of pancreatic carcinoma.[1-3] The fourth leading cause of cancer deaths in the U.S., pancreatic carcinoma is increasing in incidence and mortality.[4] It is difficult to detect during the early stages of the disease and usually becomes apparent when extrahepatic biliary obstruction occurs. Early radiologic findings may be negative and there is no well defined tumor marker for this neoplasm.[4-6]

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We report a case of signet ring carcinomas of the pancreas which was characterized by an infiltrative growth pattern similar to that described by Tracey et al;[4] in contrast, however, the present tumor was associated with a mass lesion of the head of the pancreas rather than being diffusely enlarged. This finding strongly supports the contention that the pancreas was the source of the primary tumor. Distinctions of this tumor were the thin-walled mucin-containing cystic spaces packed with a predominance of signet ring cells as well as it being the first case recorded in a woman[1-4] and also the first Kruckenburg tumor of this type.

Case Report

A 69-year-old white woman with a five-year history of mild hypertension and mild renal insufficiency presented complaining of several days of abdominal pain. A KUB xray showed no abnormalities and she was referred to clinic follow up for her guaiac positive stool sample. Two weeks later, she returned with increased abdominal pain, chest pain, dysuria, nausea, vomiting, diarrhea and constipation. Her renal insufficiency had worsened from a BUN/creatinine o 25/0.9 mg/dl five years ago, to 42/ 2.8 mg/dl two weeks ago and were now 115/13.6mg/dl.

Physical examination showed weak and lethargic patient with a blood pressure of 210/120; pulse 80; respirations 20 and a temperature 97.4 F. There was a 11/V1 systolic ejection murmur, a diffuse tender abdomen without palpable masses and 2+ pitting lower extremity edema. Initial laboratory values were: Hemoglobin 12.7 G/DL; Hematocrit 37.6%; WBC 12.2/cmm; Platelets 501,000/cmm; Sodium 143mmol/L; Potassium 6.9mmol/L; Chloride 97mmol/L; CO2 16mmol/L; Glucose 86mg/dL BUN 115mg/dL; Creatinine 13.6mg/Dl; Calcium 9.5 mg/dL; Magnesium 3.9 mg/dL; Phosphorus 9.0 mg/dL; Total Protein 6.8g/dL; Albumin 3.2g/dL; Uric Acid 13.7 mg/dL; Total Bilirubin 0.4mg/dl; Alkaline Phosphatase 1100 U/L LDH 256U/L; SGOT 37U/L.

Radiography demonstrated a large amount of stool in the G.I. tract and bilateral hydronephrosis was revealed by an abdominal ultrasound. Postrenal obstruction was confirmed by a retrograde cystogram and bilateral ureteral stents were placed to drain the dilated calyces into the bladder and to the exterior via a Foley catheter.

Hemodialysis was initiated immediately upon admission to correct the electrolyte disorders. Computerized Tomography showed retroperitoneal fibrosis, fullness of the pancreatic head, radiolucent hepatic lesions with intrahepatic duct dilation and possible periaortic lymphadenopathy (Figs 1 & 2). Mucosal deformaties in the pyloric region of the stomach were seen by esophagogastroduodenoscopy(EGD). CT also showed an obstructive lesion located at the portahepatis and pancreatic head, plus there was a right pleural effusion and ascites. An attempted ERCP showed an obstruction of the ampulla of Vater and a biopsy at this site showed a signet ring adenocarcinoma. A percutaneous transhepatic cholangiogram (PTC) was carried out to evaluate the biliary system, and a drain was placed to relieve the right hepatic duct obstruction. The left colon was demonstrated to be free of tumor by flexible sigmoidoscopy. Blood cultures during this period were positive for Staphylococcus aureus, and serum carcinoembryonic antigen (CEA) values rose from 29 to 64 ng/ml over a one month period.

Clinically during this period, the patient incurred continual problems with constipation, edema, fluctuating urine output, right lower quadrant abdominal pain, fever and significant mental status changes. She received total parenteral nutrition via a central line, 2 units of packed red blood cells for anemia which developed, antibiotics for the S. aureus infection, Procardia and Lasix to control blood pressure and edema, and medications for nausea, vomiting and pain. Her condition deteriorated furthur and she expired 7 weeks following admission.

Autopsy Findings

At autopsy the head of the pancreas was found to be diffusely enlarged by a 14 x 12 x 10cm mucoid mass. Sectioning revealed a pale fleshy tumor extending to the ampulla of vater and obliterating the distal common bile duct. Two hepatic nodules were also found by gross examination in the liver parenchyma adjacent to the bile duct. Hemotoxylin and eosin-stained sections revealed a diffuse infiltrative neoplasm which was widely disseminated (Fig 3). The predominant pattern consisted of loosely aggregated clusters of cells enclosed within thin-walled mucinous cysts (Fig. 4).

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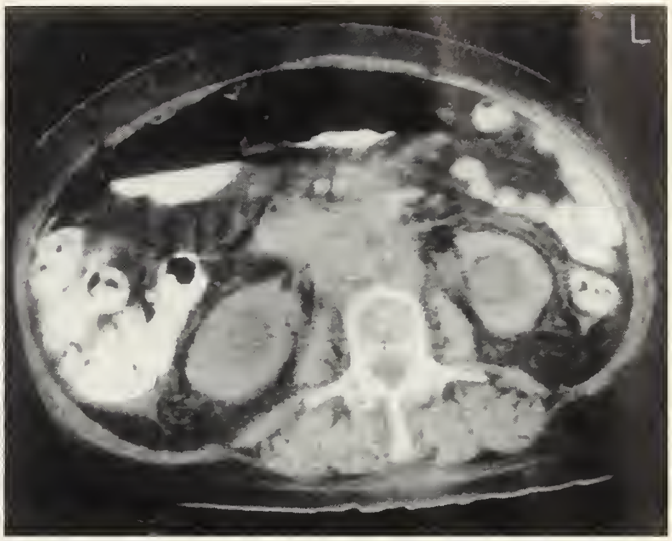

Fig I. CT of the abdomen showing a retroperitoneal mass surrounding the aorta and periaortic lymphadenopathy.

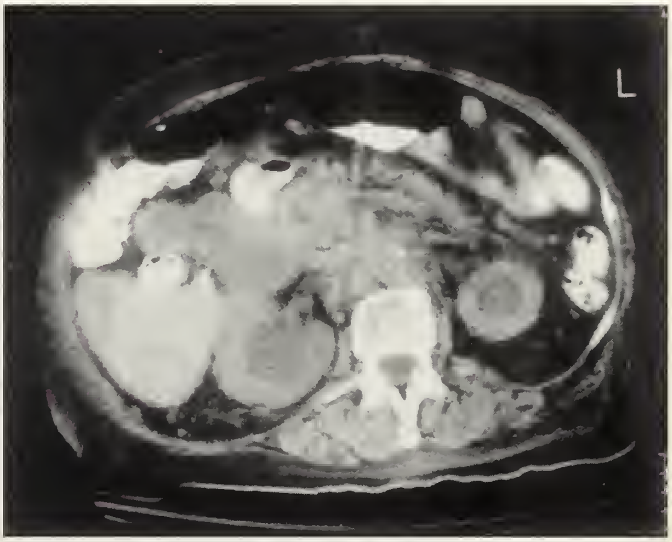

Fig 2. CT of the abdomen showing fullness of the pancreatic head and a radiolucent hepatic lesion with ductal involvement.

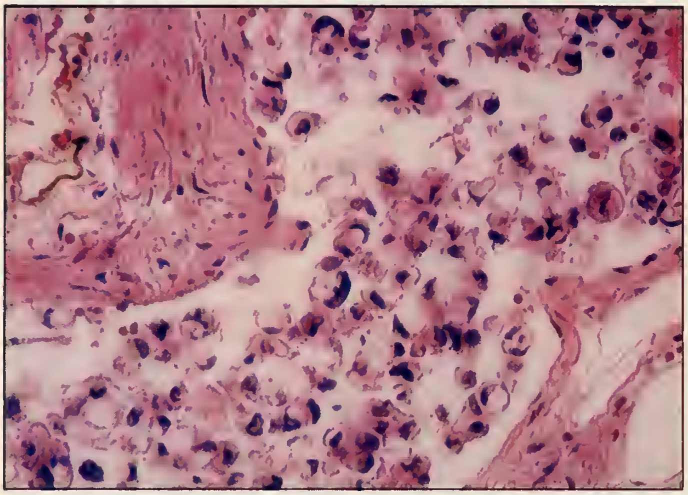

Fig. 3. Signet ring carcinoma under the capsule of a peripancreatic lymph node. Diffuse infiltrative, loosely aggregated clusters of signet ring cells enclosed in mucinous cysts. Note the pale, often foamy cytoplasm and eccentric nuclei. H & E X 200.

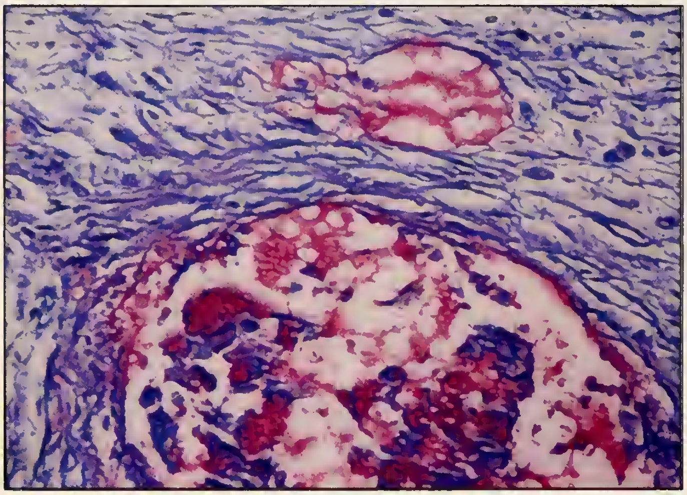

Fig. 4. Mucinous thin-walled cysts arising in the pancreas and surrounded by significant desmoplasia. Cysts contain PAS positive-signet ring cells floating in pools of mucin. PAS with diastase X 200.

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In most regions there was a marked desmoplastic response and focal entrapped PAS positive extracellular mucinous material (Fig. 4). Rarely did the cysts contain an epithelial lining such as the one observed in the adrenal gland. The carcinoma cells contained a pale cytoplasm and eccentric nucleus compressed against the cell membrane (Fig. 3).Many cells appeared distended and had a foamy cytoplasm demonstrated to contain PAS- positive diastase resistant material (Figs. 3 & 4). Other tumor cells were less differentiated and contained a large hyperchromatic nucleus. Immunostaining showed uniform staining of tumor cells for CEA (+++) (Fig. 5) and B.72.3, focalstaining for CA 19.9(+) (Fig. 6) and absence of staining by anti-P 53. Multiple microscopic sections from the esophagus, cardia, fundus, body and antrum of the stomach confirmed that the gastric mucosa and muscle were tumor-free. Histological studies showed metastases in periaortic, peripancreatic, and inguinal lymph nodes, adrenal glands, both ovaries, uterus, bladder, and large and small bowel with extension proximally to the pyloric sphincter but clearly not involving the antrum. Sections of bone marrow also demonstrated metastases but random sections of all lobes of the lungs were uninvolved by tumor. Metastatic spread down the gastrointestinal tract occurred via the lymphatics and did not involve the gut mucosa which is why it was not detected by sigmoidoscopy.

Discussion

Signet ring mucinous or "colloid" carcinoma of the pancreas is a rare tumor characterized by high mortality.[4] Owing to its diffuse infiltrative nature, and spread via the lymphatics , it is difficult to identify.[4] This tumor shows two growth patterns. The first pattern is characterized by cystic spaces lined with malignant columnar epithelium and filled with mucin. The second pattern consists of lakes of mucin containing clumps of "signet ring" and less differentiated cells.[2] The present case clearly fitted the latter category. Most cysts in this case of "colloid" carcinoma were without lining of the inner wall as occurs in mucinous cystadenocarcinoma. It should be distinguished from other more common mucin-producing tumors of the pancreas such as mucinous cystadenocarcinomas which are well-differentiated and show a papillary or papillotubular growth pattern in cystic spaces lined with epithelium.[9] The latter are also a distinct clinical entity, have a good prognosis and are not characterized by infiltration or metastases.

In a large study of over 500 pancreatic cancers[2] only 9 were found to be of the "colloid" type and all of these occurred in men.[2] Two additional cases in men were also noted by these authors bringing the total to eleven. To our knowledge, then, the present mucinous "signet ring" tumor of the pancreas is the first described in a woman.[1-4]

There was bilateral involvement of the ovaries showing that a Kruckenberg tumor can also arise in the pancreas as well as the stomach. Classically, Kruckenburg tumors are defined as signet ring adenocarcinomas arising specifically from the stomach. The definition has been expanded also to include other gastrointestinal adenocarcinomas metastatic to the ovary. Our report of a rare pancreatic signet ring carcinoma in a woman must now be included in the differential diagnosis of a Kruckenburg tumor.

At autopsy a diffuse mass involving the head of the pancreas and ampulla of Vater was found, which confirmed the CT findings of an "indistinct pancreatic head." Metastatic tumor, however, was entirely infiltrative with the exception of 2 nodules in the liver parenchyma near the bile duct which were of low attenuation by CT. The entire gastrointestinal tract distal to the ampulla of Vater appeared grossly unremarkable but was infiltrated by tumor cells at all points examined microscopically along its length. By the same token, the mucosa of the stomach and esophagus were tumor-free. The same diffuse infiltration of tumor cells occurred in the gall bladder, urinary bladder, uterus and ovaries. It is perhaps remarkable to find that the stomach mucosa was not involved at all although foci were found in the serosal fat presumably having "seeded" from the peritoneal cavity or via the lymphatics.

In contrast to the findings of Tracey et al,[4] we did not find markedly elevated CEA levels with respect to this tumor. Although serum levels did rise during hospitalization from 29 to 64 ng/ml, they were not in the 10,000-50,000 ng/ml range recorded by Tracey. It has been suggested that such elevated levels may be a marker for this variant but the present case does not

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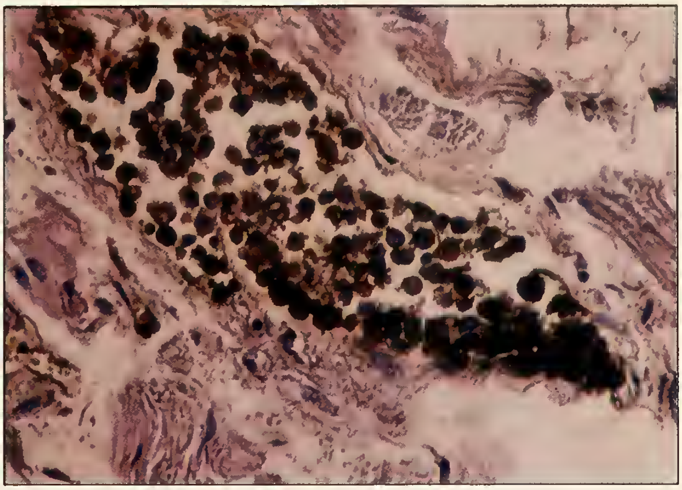

Fig. 5. Peroxidase-antiperoxidase staining for CEA demonstrating intense cytoplasmic staining of signet ring cells within cysts in the pancreas. X 200.

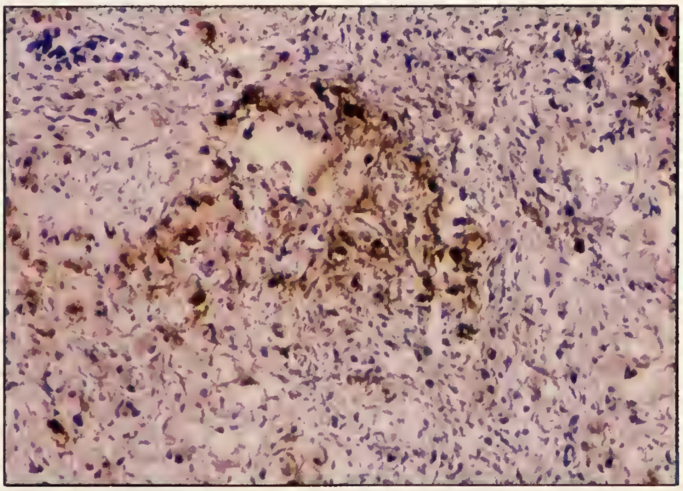

Fig. 6. Peroxidase-antiperoxidase immunostain for CA 19·9 showing focal cytoplasmic staining of signet ring tumor cells surrounded by desmoplasia. X 100.

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support this generalization in spite of there being major hepatic involvement. CEA levels in patients with liver metastasis are higher than in patients with other than liver or lung metastasis.[10] There was also no correlation between CEA tissue staining and tumor differentiation in our study which is in agreement with Tracey et al.[4] The tumor markers CA 19.9 and B.72.3 were both positive in our tumor, the former in a mosaic pattern in accordance with the findings of Schwenk et al[11] for a "colloid" tumor, although B.72.3 showed the most uniform and intense staining. No staining occurred with anti-P 53. There is presently no specific marker for pancreatic cancer although quantitation of CA 19.9 in sera of patients suffering from gastrointestinal cancer have revealed a high specificity (up to 98.5%) and sensitivity (up to 82%) for pancreatic cancer.[12-14] The anti-CA 19.9 antibody reacts with a monosialoganglioside antigen that corresponds to a sialylated Le^a blood group substance.[15] As the Le^{a-b} phenotype lacks this antigen, cancer cells in individuals with this phenotype do not express the CA 19.9 antigen. The inappropriate expression of antigen by many tumors and their hetergeneity suggests significant misinterpretation is possible in the case of negative results. In attempting to discriminate between chronic pancreatitis and pancreatic carcinoma researchers were unable to differentiate hyperplastic, metaplastic and dysplastic cells from tumor cells by using CA 19.9 and CA 50.[11]

This report is the first for a Kruckenburg tumor of pancreatic origin. This case is important because signet ring carcinoma of the pancreas is a rare tumor which has only previously been recorded in men. Finally, although this tumor was CEA positive, the serum concentration of this marker was extremely low.

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A Comparison of the Restraint and Seclusion Experiences of Patients with Schizophrenia or Other Psychotic Disorders

Kemal Sagduyu, MD, Robijn K. Hornstra, MD, Stuart Munro, MD and Virginia Bruce-Wolfe, PhD

Objective: The purpose of this study was to understand how restrained and secluded patients felt about these interventions, and to compare the perceptions of the two groups. Methods: Subjects were 25 restrained, and 25 secluded inpatients. A questionnaire was developed to explore patients' feelings and perceptions of the two interventions. Comparisons were made on the clinical data and the answers from both groups. Results: Restrained and secluded patients seemed to view some aspects of their experience differently. Few (40%) of the secluded group reported finding positive aspects, compared to even fewer (20%) of restrained. Most patients in both groups felt negatively about staff involved, and disagreed with staff on the reported intensity of their documented threatening behavior. The interventions seemed to have only a brief modifying effect on patients' behavior following these interventions and did not seem to modify future behavior. Conclusions: Despite their differences, many patients in both groups reported negative feelings about the interventions and the staff involved. Both groups seemed not to perceive the procedural staff interactions as communication. Our study population seemed to be a subgroup of the admitted patient population who were repeatedly requiring seclusion or restraint. Screening this patient population during the admission process, and planning preventive and alternative interventions could decrease the need for restraint and seclusion.

As we reach the last decade of the 20th century, it is possible to recognize the emergence of a medical era that engages the perspectives of patients in the transformation of health care.[1]

Current practice models in psychiatry espouse a consumer-driven system. In keeping with this system, it is necessary to obtain feedback from patients on two controversial interventions; restraint (R) and seclusion (S), for which guidelines[2] have been established by the American Psychiatric Association.

Since restraint and seclusion have been controversial topics for a number of years, many studies have been done to explore these interventions.

Some authors have investigated correlated factors. Schizophrenia is reported to be the most common diagnosis for restrained and secluded patients.[3-6] Some studies reported that younger patients were more likely to be placed in R or S.[3,8,11,12] Others attempted to find commonalities such as the time of the day or shift in which patients are most likely to be placed in R or S,[8,11,13] the unit census,[11] and length of hospital stay.[5] However, their findings were not statistically significant. The most common precipitants leading to R and S are reported as: violent behavior;[3,7,8] agitation;[3,4,8,9] disruptiveness;[4,5,8,10] unresponsiveness to verbal interaction;[7] danger to self;[5] threatening behavior;[5,8] inappropriate behavior;[10] uncooperativeness,[6] and impulsive behavior.[4,10]

Few studies looked at patients' feeling and perceptions while in R or S, while none of these compared the feeling and perceptions of patients who had been in restraint with the ones in seclusion. One study[10] reported that patients in general did not know why they were in S. Another study[14] mentioned that pictures drawn about the S experience drew attention to the staff person in attendance. Another[8] stated that patients wanted more staff contact and felt frustrated in the absence of staff while they were in seclusion. Another study[10] reported that patients did not know how often staff checked on them while they were in S, and two studies[3,10] reported that most patients felt angry at the staff for putting them into S.

Continued on page 304

Continued from page 303

One study[15] reported that the best single predictor of violence was a history of previous aggression by the patient. Another[6] claimed that whether a patient viewed R negatively or positively had no effect on the patient's future (aggressive) behavior. The need to explore behavioral consequences of these experiences (e.g. does it induce any change in patients' future behavior?) has been stressed.[12]

The purpose of this study was to understand how restrained and secluded patients feel about these interventions, and to compare the perceptions of the two groups. The following foci were investigated to help understand different aspects of patients' perceptions: *What do patients feel while in R or S (e.g. do they all experience negative feelings)? *Do patients know why they were placed in (e.g. Do they agree with the reasons staff report)? *How do patients feel about staff (e.g. Do they want more staff contact)? *Does previous experience with either procedure change patients' perceptions of these interventions or modify future behavior? *What alternatives do patients suggest to R and S?

Methods

Subjects

The subjects were 18 to 60-year-old inpatients residing at one of the four Western Missouri Mental Health Center (WMMHC) units at the time of the study. WMMHC is a facility of the Missouri Department of Mental Health and functions as the Department of Psychiatry for the University of Missouri-Kansas City School of Medicine. The first twenty-five {25} consenting patients who had been restrained and the first twenty-five {25} consenting patients who had been secluded during their current hospital stay were selected as subjects.

Measures

The following clinical data were recorded: age; gender; whether or not patients were given medication during R or S; the amount of time patients spent in R or S; diagnosis; prior R and S experiences; prior hospitalizations; and elapsed time between the R or S and the interview.

Study questionnaire

A questionnaire was developed that contained questions relevant to our research questions (Appendix I). Mostly open-ended questions were included so that patient answers would not be limited.[16] The study questionnaire also included some yes or no questions as well as an adjective check list. The answers to opened-ended questions were reviewed by two psychologists, two psychiatrists, and a psychiatry resident who categorized verbatim responses.

Procedure

Every day of the study the interviewer, a research psychiatric nurse, checked each inpatient unit and obtained the names of patients who were in S or R during the last 24 hours. The interviewer then consulted with the clinician or the nurse in charge before approaching any patient. Thus, the timing of patient interviews rested on staff judgements. Also, clinicians had the opportunity to decide if participating in the interview was contraindicated for any particular patient. The interviewer contacted the selected patient, explained the purpose of the study, described the content of the data to be collected, the rights of human research subjects potential risks and benefits, and the confidential nature of the data obtained. Then she presented the consent form. The interviews were conducted no later than two days after obtaining the informed consent, on average 13.5 hours after the events

Results

Overall, 76% of the restrained patients and 80% of the secluded patients carried a diagnosis of either schizophrenia, or other psychotic disorders. There were no differences between the two groups in terms of psychotic diagnoses. Mean age for restrained and secluded patients was 29.4 years (SD=7.46) and 36.6 years (SD=11.37) respectively. This difference was significant at the .01 level, (t=2.63, df=48).

Mean duration for R during the present hospitalization was 4.0 hours (SD=2.75) and mean duration for S was 2.04 hours (SD=2.21). This difference was statistically significant (t=2.78, df=48, p=.008).

When patients' answers were combined, approximately 75% of the restrained patients described R in a negative way. When they were asked specifically how they felt about the experience, patients gave answers like; "horrible," "terrible," "helpless," "lonely," "like hell," "like an animal." Patients that found something good about R said it gave them time to think and helped them calm down.

Do restrained patients view their experience differently than the secluded ones? The answer appears to be yes. Of the secluded, only about 58% experienced seclusion in a negative way. For those patients who were reminded of past experiences during the present R or S, 89% of the restrained and 71% of the secluded remembered events of confinement or physical abuse.

Significant differences where found between the restrained and the secluded groups when considering the number of patients who received medication (Chi-Square=4.02, df=1,p=.05). Medication was given to 72% of the restrained patients as opposed to 44% of the secluded patients. Only 58% of the restrained patients who were medicated slept. In contrast, 80% of the medicated secluded patients slept. This difference could be explained by the possibility that restrained patients were more agitated.

Overall, 72% of the restrained patients and 56% of the secluded patients slept during these interventions. While 5 (20%) of the restrained patients reported dreaming, 80% of these had unpleasant dreams (e.g., "people cutting up people," "being tied down," "trying to get up," and "nightmares"). Only 24% of the secluded patients reported dreaming, but generally their dreams were more pleasant (e.g., "I was in a limousine," "I was in grandma's house," or "I was with Michael Jackson").

Patients generally knew why they were placed in, and most agreed with staff on the reasons for their restraint and seclusion. Patients' descriptions of reasons for their R or S were scaled by the research team in terms of the degree of aggression with five <5> representing the most aggressive and one <1> the least aggressive. Sixty four percent of the answers given by restrained patients were rated as extremely aggressive. However, only 36% of the answers given by secluded patients were rated as extremely aggressive.

The reasons patients gave were then compared to the ones documented by staff. Staff notes and patient answers were scaled in terms of degree of aggression from one to five. While 48% of the restrained patients and 24% of the secluded patients gave reasons that fully agreed with staff notes, the rest either partially agreed, or definitely did not agree. Staff described the behaviors leading to R as much more "aggressive" than the descriptions of patients.

How do patients feel about staff that place them in restraint or seclusion? Overall, 89% of the restrained patients and 73% of the secluded patients reported negative feelings. These were mostly feelings of intense anger and dislike. Interestingly, 60% of the restrained patients and 68% of the secluded patients reported that they did not have any conversation with staff during these interventions. Patients reporting staff contact not only made no description of the content or the quality of the conversation, but also did not request or demand more staff contact.

TABLE II

Suggestion	Restraint	Seclusion	Total N	%
Talk	9	10	19	35.8
Room stay	4	4	8	15.0
Other	0	8	8	15.0
Medicine	4	3	7	13.2
Seclusion	5	0	5	9.4
Restraint	0	2	2	3.7
No Alternative	4	0	4	7.5

Almost all patients in both groups had a history of previous psychiatric hospitalizations. Overall, 80% of the restrained patients and 88% of the secluded patients had been restrained or secluded during these prior hospitalizations. When patients were asked if the current intervention changed them, 79% of the 47 patients who answered reported no change or a negative change, indicating no modification of future aggressive behavior.

Almost all of the restrained and secluded patients resumed normal daily ward activities following the restraint or seclusion. Only 6% of the 50 patients expressed any anger. These results suggest that a patient's short-term aggressive behavior is modified by restraint and seclusion. However, since the majority of restrained and secluded patients had experienced these confinements during a prior hospitalization, we can conclude that the behavioral change is only temporary.

Table II presents the alternatives patients suggested to R or S. Most (78.4%) of the patients suggested alternatives. The alternative most often suggested was conversation with staff (talk).

Conclusions

Combining the answers from both groups, we see that many patients in both groups felt negatively about these interventions. This supports the report of one

Continued on page 306

Continued from page 305

study[10] that most patients feel negatively, while some feel positively about S experience. There is need for repeat studies with more close-ended questions to seek supporting statistical evidence of significantly more positive feelings (twice as many) of secluded patients.

There was no significant difference between groups for gender. Looking at gender, 64% of the restrained, and 40% of the secluded patients were male. Although not statistically significant, these numbers may indicate a possible trend. That is, females may be more likely to be secluded rather than restrained and vice versa. Our study supports the suggestion that there is a continuum of behaviors, with verbal aggression at one end, and physical aggression at the other.[19] In our study, both groups knew the reasons why, and agreed on the level of aggressive behavior necessary to place them in R or S. However, they disagreed with the intensity of their aggressive behavior documented by staff that made the interventions necessary. This finding differs from one study[10] in which most patients had no idea or false ideas of why they had been secluded.

In our study, most (89%) of the restrained and of the secluded (73%) patients felt negatively about staff that placed them in S or R. This result supports the suggestion[6] that patients are more likely to view the events leading to R as conflict with staff, and two reports[3,10] noting that secluded patients were angry with staff. One study[8] reported that patients had expressed wishes for more staff contact and frustration about staff absences during meeting times. Another study claimed that patients were unaware of the staff checkups. We did not get any comments about staff from our study groups in open-ended questions.

The seclusion and restraint both seemed to decrease patients' aggressive behavior shortly after the interventions. Most patients in this study returned to daily activities after the R or S, not acting out or requiring repeat interventions. Meanwhile, almost all of the patients in our research group reported having previous experience with either procedure, meaning that the interventions do not seem to affect the future behavior of this patient population.

The history of previous aggression has been reported as the single best predictor of future aggression.[15] It also has been reported that recidivists, although 5% of the at-risk inpatient population, were responsible for 53% of the assaults.[20] In WMMHC, approximately 13% of patients admitted in fiscal years 1991 and 1992 have been restrained, and approximately 13% have been secluded. This means that almost all of our research population consisted of a certain 13% of the admitted population. It has been recently noted that in the accuracy of predictions of aggression, the level of patient aggression reported using self-reports and collateral reports has been higher than has been obtained using other methods.[21] These findings suggest that previous S or R may be the best predictor of future S or R, and the utilization of self-reports would significantly increase our prediction.

We suggest screening the repeatedly restrained and/or secluded population on admission, by simply asking every patient if they have ever been in R or S. We also suggest asking them the reasons why, and what could have been done at the time to avoid it. I is known that a high percentage o the staff involved in these interventions get physical injuries. The FDA estimates that at least 100 deaths from improper use of restraints may occur annually.[17,18] Although it is difficult to offer alternatives to a young, strong and aggressive patient, we should try alternatives to R and S.

Several patients in our study suggested the alternative of conversation, medication etc. Although half of the patients reported conversing with staff, we had no comments regarding the content of these conversations. This suggests that patients in general may not be perceiving the standard procedural interactions of staff during their R or S as a form of communication, and modifications in the procedure of staff-patient interactions and/or staff training may be needed to change this condition. In two studies,[3,10] when asked what else could be done, patients stated they should be able to spend time in seclusion room with the doors ope when they needed, staff should talk to them instead, medicine should b given instead, and punching bags, access to music, and comfortable furnishings should be available. As our study also indicates, patients giv us plenty of information, including their individual suggestions for alternatives to R or S. This information will help us modify individual treatment plans in a way to include the past history of R and S, possible warning signs and the alternatives suggested and hopefully make these controversial interventions less necessary in this patient population.

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APPENDIX I

1. **Sometimes it is necessary for staff to put patients in seclusion. What do you think are some reasons staff would need to do that?**
2. **What else could the staff do if they didn't use seclusion?**
3. **Since you've been in seclusion, can you tell me what that was like for you?**
4. **Do you remember why you were placed in seclusion?**
5. **How long did your seclusion last?**
6. **What was good about your seclusion experience?**
7. **What was bad about your seclusion experience?**
8. **Did your seclusion experience remind you of any personal experiences in the past?**
9. **Were you given any medication during your seclusion experience?**
10. **Did you sleep during your seclusion? What did you dream about during this sleep?**
11. **What did you do after your seclusion?**
12. **Did you have any conversation with staff during your seclusion?**
13. **How did you feel about the staff that placed you in seclusion?**
14. **Did this experience change you?**
15. **Please circle the adjectives that fit your seclusion experience most. (you may circle more than one)**

Calmed
Mistreated
Reassured
Helpless
Happy
Confused
Secure
Depressed
Upset
Agitated
Worried
Afraid
Fairly treated
Angry
Stimulated
Bored

16. **Was this your first seclusion experience?**
17. **Tell me about your previous experience?**
18. **Have you been secluded when you were hospitalized during previous admissions?**

**** Same questionnaire was given to the restrained patient group, in which the word "seclusion" was replaced by the word "restraint."***

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100 Years Ago

A paper presented at the 38th Annual Meeting of the Missouri State Medical Association held in the opera house, Hannibal, Missouri, May 21, 1895.

Some Surgical Sins *(excerpt)*

By Emory Lanphear, MD, PhD, St. Louis, Missouri

Sixth Sin - STEALING PATIENTS FROM OTHER SURGEONS.

This is more often the cause of hard feelings between surgeons than any other thing, though, as it is done usually in such a genteel, "ethical" way there is no recourse left to the injured party, except to *growl*. I recall in instance. I had made all arrangements to operate in conjunction with Dr. R. B. Maury, of Memphis, upon a southern lady, who had a very bad pyo-salpinx; now, in the city where she was stopping there was a surgeon who had made a number of sections without a death and was very ambitious to reach the magical fifty cases without a death, beyond which worldwide fame is supposed to lie; he, hearing the case, managed to be introduced, and with an eloquence worthy of a better cause, persuaded her that he was the only man who could do the work well; he actually took her in his own buggy as he left, carried her to the hospital and operated upon her without any preparatory treatment, and without waiting to consult her husband, who had left the city for a day; the patient died a few moments after removal from the table; the surgeon "broke his record," received not a dollar, and made an enemy of the husband - but, as for me, I am his friend still; it was simply a little professional indiscretion, bred of enthusiasm on his part. But there are cases of genuine, pure, unadulterated stealing, "too numerous to mention," as the auctioneer says, and too vexatious to repeat. As no member of the Association would be guilty - therefore, I dismiss it.

Seventh Sin - REPRESENTING CAPITAL OPERATIONS AS TRIFLING.

In order to secure consent to operations some are inclined to belittle the danger, represent the work as "trifling" etc. Of course I do not now refer to instances where there is good reason for not going into details with the patient, explaining the dangers to such a degree as to cause refusal to consent to an urgent operation. Example teaches better than precept. One of our surgeons of international reputation, had as a patient one of the wealthiest women in the city. Disease, ovaritis chronica. She was doing well under chronic treatment and would have remained a semi-invalid to the end of her days, but was ambitious to be well, as became a leader of society. The doctor was likewise ambitious - to be known as an abdominal surgeon, and so he tempted the woman with hopes of health. He said, "Removal of the ovaries is a very simple, little operation; some morning I'll bring my table, my nurse and my assistants and we'll take out those little troublesome things and make you well." "And is there any danger, doctor?" "None in the least, madam." And she consented. Oophorectomy was performed. The next day the doctor left town for twenty-four hours. Patient developed peritonitis and was told next morning she had but a few hours to live. She prepared a surprise party for her physician. When he returned to town he hastened to her home and there found some twenty or thirty ladies, the most prominent and influential in his practice, gathered at the bedside. The lady reaching out her hand seized his in a grasp not to be shaken off. Calmly, amidst profoundest silence, she spoke: "Dr. ---, I was a happy woman, an invalid to be sure, but happy in the love of relatives and friends, surrounded by all the comforts and luxuries that wealth can provide, not suffering much, though wanting health. I could have lived for many years in the peace and happiness of my family. But in an evil hour you came and sang the siren's song. You told me there was no danger. Now I have peritonitis - am dying by your hands. Do you deserve further confidence or success? No. I have called your friends to hear my last words to you. *With a dying woman's breath* I CURSE YOU. GO!" As she flung his hand from her he went - and his business went also. Need more be said?

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Journal of the Missouri State Medical Association

July 1995

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- ❑ *New Feature:* Medical Legal Issue of the Month
- ❑ Otolaryngology Quiz #6
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MISSOURI MEDICINE

VOLUME 92, NUMBER 7

Cover Story

St. Louis Medicaid HMOs discuss the Managed Care Plus (MC+) Program 338

On the Cover: HMOs take on the risks of providing care to Missouri's Medicaid population.
Design by Carla Malone-Steck, a professional fine artist and graphic designer in Jefferson City, Missouri.

President's Page

The Golden Egg - *Frederick Hahn, MD, MSMA President* 319

Practice Management

Tax-Exempt Integrated Delivery Systems: Part 1, Federal Anti-Kickback Laws 331
Paul L. Vogel, CPA, JD and Helen M. Cripps, Attorney at Law

Managed Care

HEDIS - What is it? What does it mean to me? How does it affect my practice? 336
Randall Treadwell, MD and Janet Treadwell, MSN

New Feature

Medical Legal Issue of the Month: Family Violence 333
Mary Beck, RN, MSN, JD

New MSMA Benefit

Video Medical Stories Begin State Syndication 344

Public Health

Lyme and/or Lyme-like Disease in Missouri 346
Edwin J. Masters, MD and H. Denny Donnell, MD, MPH

Scientific Section

Otolaryngology Quiz #6 329
Gary J. Nishioka, DMD, MD, Gregory P. Renner, MD, & Robert P. Zitsch III, MD

Acute Poisoning from Gamma Hydroxybutyrate (GHB) 354
Mark T. Steele, MD and William A. Watson, PharmD, ABAT

Pseudoaneurysm of the Left Ventricle Presenting as Congestive Heart Failure without Ischemic Chest Pain or Q Wave Infarct - *Jay I Lipoff, MD, FACC* 358

Letters to the Editor 322
Alliance Message 323
CME Calendar 362
Classified Listings 364

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Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the per copy cost of the annual August Directory is $15.00.

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President's Page

The Golden Egg

Frederick Hahn, MD, MSMA President

The medical profession means many different things to as many different people. For me - I must liken it to the "Goose that Laid the Golden Egg."

The Doctorate of Medicine, the Oath of Hippocrates, and the License to Practice Medicine do not and should not represent a guarantee of wealth, a right to live on "Pill Hill" or an envied social standing. Collectively these documents are a writ for a trusted personal relationship between a physician and his or her patients.

The Golden Egg is not gold or any form of currency, rather it is a treasured relationship, one which has and should continue to exist between a patient and his or her physician. These relationships are honest, open, truthful, and wholesome relationships based on unencumbered trust.

I freely admit to my peers, to the students with whom I have shared, and to my patients, that the greatest moments of joy which I have found in my practice are the fruits of those relationships.

Many times these fruits have been a good surgical result, or a patient's return from the threat of devastating disease to good health and a life reclaimed. Other times it has been the warm oneness derived from sharing grief and disappointment with patients and their families.

In these memorable experiences which represent a part of each of our professional lives, we have **remained focused** on the true meaning of that Golden Egg.

Further, we have each seen, read, and/or experienced tremendous feats by individuals and organizations that have **remained focused** with a eye single to a worthy end. Children have been brought to the U.S. for sophisticated medical and surgical care. Physicians have travelled to foreign lands on medical missions of good will (all with no expectation of financial gain). In each case the experience is exhilarating to not only the participants but also to those who observe.

I know of no one who does not recognize that there are numerous areas of improvement needed in the field of health care. It is my sincere hope that both those providing and those administering health care would **remain focused** on the true meaning of that Golden Egg.

For this to happen, those of us who are health care givers must be able to expect the same trusting relationship with those who wish to manage us that our patients expect from us.

I must admit that in the majority of the contracts which I have seen to date, in place of this trusting relationship with managed care, I am finding proposals which are deceitful, manipulative, and calculating. They are neither in the best interest of the patient, nor in the best interest of physicians.

Time and again, I recall one of my revered professors who would say most sincerely to his patients, "If you were my (mother, father, sister, brother, or other relative, as the case may be) this is what I would want for you." During my practice years I have tried to emulate this behavior. How I wish that our insurance companies and managed care organizations would do the same.

As all interested and affected parties look for that most desirous of working relationships, my challenge to everyone in the health care arena is to model those working agreements on the same **trusting** relationships our patients rightfully expect of health professionals.

We dare **not** allow any bottom line oriented force kill the Goose which lays the Golden Egg! MoMed

Letters to the Editor, etc.

Dear Dr. Thomas:

The article written by Tom Bennett and Lewis Vollmar on community based managed care networks was brief, concise, to the point, but not inclusive. All too often managed care networks neglect in their organizational structure to include behavioral health care. There is no doubt that psychiatric and mental health interventions play key roles in maintenance of community freedom from disability and help reduce disability in patients with chronic medical illnesses. Most progressive managed care companies recognize that at first it might be possible to save money by cutting back on behavioral health care, but that in the longer run including behavioral healthcare as part of the total system not only reduces costs but increases patient functioning and wellness. I hope that in future presentations of managed care you will seek to make certain that behavioral health care takes its place in the full continuum of services that any good network should have.

Bernard D. Beitman, MD
Professor of Psychiatry and Medicine
Chairman of Psychiatry and Neurology
University of Missouri-Columbia
School of Medicine

Dear Members of MSMA:

Thank you very much for the Honors Graduate Award. I greatly enjoyed my medical school years at the Washington University School of Medicine and it was nice to have my efforts recognized with this award. My plans are to begin my residency in diagnostic radiology this summer at the Mallinckrodt Institute of Radiology. Thanks again for the recognition.

Lawrence S. Kaskowitz

Dear Dr. Beitman:

Thank you for your letter of May 17th. The article on Physician Directed Community, Community Based Managed Care Network was meant to include all aspects of the delivery of healthcare services including behavioral medicine. The model is designed to offer a comprehensive range of services that will include mental health and incorporating and networking with established community based resources.

I do apologize for the oversight in not specifically including behavioral medicine as an integral part of this model.

Sincerely, Tom Bennett
Executive Vice President of MSMS, Inc.

Dear Mr. Swarens:

I am writing this letter to let you know how please our physicians are regarding the help that Ron Ellison has given us in securing the program "Grateful Med."

Our situation is somewhat unique in that we our a small rural hospital in Northwest Missouri and have some of CME programs done by physicians from the Omaha area and our staff consults with these physicians when problems arise. This program will allow us to access articles, etc. that we might not otherwise have available because of our small library and limited funds to support it.

We feel very fortunate to have this available to us and feel that this program might benefit other rural hospitals also.

James K. Hunter, MD
Chief of Staff and CME Chairman,
Community Hospital,
Fairfax, Missouri

Dr. Hahn:

Congratulations on a well thought-out, pertinent and beautifully written article. *(President's Page, June 1995)* I think you echo the sentiments of most, if not all of MSMA, contrary to your humble disclaimer!!

Bravo! Fred, Bravo!
Gordon Goldman, MD, St. Louis

Dear Dr. Hahn:

Thank you for taking the time to write me about the tort system. I appreciate hearing from concerned citizens like you. Hopefully, you will continue to communicate your opinions to me on issues that you feel are important.

Our nation's current tort system needs drastic improvement. The current system is a patchwork of fifty different state laws that have an adverse affect on our economy. The current system threatens competitiveness, stifles scientific innovation, and reduces productivity while simultaneously costing American jobs and raising the price of consumer goods. This national problem demands a national solution, and that is why I support efforts to enact a uniform national standard that will treat everyone fairly and equally.

The tort reform legislation approved by the Senate (S. 565) is different from the legislation that passed in the U.S. House of Representatives. The Senate Bill does not include all the same provisions as the House bill. For example, the House passed an omnibus legal reform bill that included medical malpractice liability reform, whereas the Senate bill failed to include such needed reforms.

Thanks again for your letter on this important issue. I hope to hear from you again. If you have any further concerns, please do not hesitate to contact me.

John Ashcroft, U.S. Senate

Alliance Message

Sandra Mitchell
AMA Alliance President-elect

Sandra Mitchell of Kansas City, Missouri, was elected president-elect of the AMA Alliance at the June meeting. She has previously served at the national level as secretary, field director, chair and member of the Legislation Committee, AMA Alliance representative on the AMA Council on Legislation, chair of the Health Promotion Committee, and a member of the Bylaws and Finance Committees.

Sandra served as the Missouri State Medical Association Alliance president; Bylaws, Legislation, Long-Range Planning, and Membership Committee chair; recording secretary; and district director. She has also served on the Missouri State Council on Legislation, as well as the Missouri State Medical Association Council on Legislation. Sandra was president, president-elect, and secretary for The Medical Alliance of the Metropolitan Medical Society of Greater Kansas City.

Among other volunteer efforts, she has been active with auxiliaries of Trinity Lutheran and St. Mary's Hospitals. She was Doctors' Day chair for Trinity Lutheran Auxiliary, and worked on Physicians' Health Screen. She worked with the local chapter of the Missouri Hospital Association on "How to be a Good Auxilian," as well as "Communication, Learning to be a Good Auxilian for the MHA state convention.

Sandra is a graduate of the Barnes Hospital School of Nursing and worked as a registered nurse in the burn research unit of Barnes Hospital. She is office coordinator, consultant, bookkeeper, and nurse for the practice of her husband, John D. Mitchell, MD, a urologist. The couple has four children.

Cole County Medical Alliance made "front page" news delivering 45 helmets and safety booklets to the Jefferson City Day Care Center, a United Way supported center. The project goal was to let kids know the importance of protecting their heads from possible injury when riding their bikes, roller blading, or even skate boarding.

To raise money to purchase the helmets the Alliance held a Doctor's Day costume party. Donations of $10 per person for this event raised $470 for the project.

Three Alliance members, Susan Carr, Karen Rupright and Stephan Sanfelippo, also appeared on the local television news program. They discussed the Helmet project and shared helmet safety factors and purchasing advice.

Cole County Alliance also held a Mini-Internship program involving four community leaders - a Circuit Court Judge, General Manager of the Chamber of Commerce, General Manager of the local television station, and an Insurance Health Care Specialist from the Missouri Department of Insurance. Participants were paired with Bill Musick, MD, of St. Mary's ER; Brian Conley, MD, of Capital Pediatrics; William Kimlinger, MD, of Family Care Associates; and, Dean Breshears, MD, of St. Mary's ER. Each intern expressed great praise for the physician they followed and sincere appreciation for the opportunity to participate in the program. They all indicated they would highly recommend the program to future potential interns.

Greene County Medical Society Alliance members **Sheila Wright** and **Teri Hacker** for their election to the City Council of Springfield, Missouri. Greene County also has Alliance government leader, **State Senator Roseann Bentley**.

Two Missouri entrants were recognized as runners-up of the AMA Alliance 1995 Health Awareness Promotion (HAP) Awards contest. **St. Louis Metropolitan Medical Society** and the **SLMMS Alliance** were recognized for their joint efforts in producing the "Teen Dating and Violence" brochure. The **Boone County Medical Society Alliance** was recognized for their *Organella* health education program.

Tax-Exempt Integrated Delivery Systems: Part 1, Federal Anti-Kickback Laws

Paul L. Vogel, CPA, JD and Helen M. Cripps, Attorney at Law

As integrated delivery systems (IDS) become more and more popular, many independent physicians and physicians' medical groups are faced with the decision of whether to sell the practice and "go to work" for the new owner. If the decision is in the affirmative, the question then becomes one of which buyer to choose. Many times, the decision is to sell to one of the large, tax-exempt health-care providers. This article identifies several requirements in a typical sales scenario that will impact the individual physician in light of the Federal Anti-Kickback laws. In the second part of this article we will discuss how such a scenario may be further affected by Stark I and Stark II laws.

Common Scenario

The basic structure of a tax-exempt IDS sale can be summarized in a few steps as follows:

1. A tax-exempt hospital or hospital holding company creates a wholly-owned subsidiary (the "Foundation") to acquire and operate a physicians' medical group practice as an IDS.

2. The Foundation purchases the assets from the medical group.

3. The Foundation employs the physicians directly or enters into a professional service agreement (PSA) with the medical group to provide medical services to the Foundation.

The benefits of such an arrangement appear obvious. The member physicians of the medical group are able to liquidate the capital tied up in the practice; certain liabilities associated with operation of the practice are transferred to the Foundation and its parent; and the physicians have good jobs once the sale is completed. Further, the purchaser, as a tax-exempt entity, may be able to use tax-exempt bonds to finance the purchase. This sounds simple, right? Not necessarily. The complexities associated with such an agreement can be overwhelming and should be fully understood before proceeding.

While the method of arriving at a purchase price is of critical importance to obtain the Foundation's tax-exempt status, the methodology is beyond the scope of this article which focuses on those restrictions impacting the physicians' practices after the sale. Suffice it to say, the purchase price must be determined under a method approved by the Internal Revenue Service (IRS) to obtain tax-exempt treatment and tax exempt financing for the Foundation. Further, as discussed below, care must be taken in valuing intangible assets to avoid violation of certain health care regulations.

To obtain tax exempt status, the Foundation must be established for a charitable purpose. The IRS uses a "community benefit" standard in determining whether a charitable purpose exists. While the integration of health care services alone may provide a benefit to the surrounding community, several other requirements must be satisfied to ensure tax-exempt status and tax-exempt financing. These requirements may be somewhat less than desirable to many physicians.

- The Foundation must be controlled solely by an independent board of trustees. To fall within the IRS safe harbor for this requirement, no more than 20% of the board may be comprised of physicians. The remainder of the board will consist of members of the community most likely appointed by the parent of the Foundation.

Obviously, the physicians' control over the environment in which they work will be somewhat diminished.

- The Foundation must provide a certain amount of charity care. In turn, the compensation agreement or PSA will require a certain amount of charity work from every physician. While the standards for "community benefit" of hospitals and clinics differ with respect to charity care, compensation based on gross revenues in either case will result in lower compensation than if all patients had the ability to pay.

- Compensation levels must reflect the Foundation's tax-exempt purpose, arm's-length negotiations and overall reasonableness. As such, physician compensation by the Foundation must be negotiated by an independent committee without direct physician representation on the committee. Physician influence will be limited to the ability to appoint a minority of the committee members and the 20% representation of the board of trustees which must approve the compensation. While compensation may be based on capitation or gross revenues, it appears profit will not be an acceptable barometer for compensation level.

- The initial employment contract or PSA should not be too short or tax-exempt status may be denied on the grounds that the community benefit is outweighed by the private benefit of retirement bailout for the physicians. On the other hand, the initial employment contract or PSA cannot exceed five years (two or three years in some instances) in order for tax-exempt financing to be available for the purchase. Further, the contract must grant the Foundation certain cancellation rights to guarantee tax-exempt financing. Thus, although anticipated, there is no guarantee of long-term employment for the individual physician. This risk seems mitigated somewhat where there is a PSA arrangement with a medical group in close proximity to the Foundation's medical facilities.

In addition to the tax issues concerning the sale of the physicians' practices to a tax-exempt organization, there are also health care regulatory issues that must be addressed. The IRS conditions all rulings on the tax-exempt status of such Foundations on compliance with the Federal Anti-Kickback Laws contained in the Social Security Act, the provisions of which are discussed below.

Regulatory Concerns

The Fraud and Abuse - Anti-Kickback restriction prohibits the payment to any person in return for the referral of Medicare and Medicaid patients. The laws make it a felony to knowingly and willfully offer to pay, solicit, pay or receive any remuneration in return for referring a person for the furnishing of any item or service for which payment may be made, even partially, under the Medicare program or a State Health Program. The remuneration can be made either directly or indirectly, and can be either in cash or in kind. The prohibition includes any consideration given in order to induce such a referral. In addition to the criminal penalties, the Department of Health and Human Services is authorized to impose civil sanctions in the form of excluding participation from the Medicare and Medicaid programs for violation of the laws. For physicians employed by a Foundation or its parent, it is important to note individuals receiving payment for the referral of patients may also be subject to criminal and civil penalties.

There are five exceptions to the Anti-Kickback prohibitions set forth in the statute itself. In addition, the Department of Health and Human Services has issued "safe-harbor" regulations which describe situations where parties will not be subject to prosecution under the law, if they comply with the requirements set forth in the regulations.

In the context of an Integrated Delivery System, an important exception to the Anti-Kickback restrictions is the exception in the statute for "any amount paid by an employer to an employee (who has a bona fide employment relationship with such employer) for employment in the provision of covered items or services." The regulations also provide safe-harbors which may be helpful in the Integrated Delivery System. These include safe harbors for Employer-Employee relationships (this is in addition to the statutory exception for Employer-Employee relationships); Personal Services and Management Contracts; and Space and Equipment Rental Agreements.

In the Employer-Employee Safe-Harbor Regulation, it is important that the physician be employed either by the Foundation or by the medical group which is

Continued on page 326

Continued from page 325

contracting with the Foundation. In addition, it should be noted that the exemption does not apply to payments which may be made to employees (the physicians) for the purpose of compensating them for referrals of patients. This is so because the statute only exempts payments to employees which are made for the "provision of covered items or services." Payments for the referral of patients are not payments for providing covered items or services, and are therefore, not exempt.

In order for the Personal Services and Management Contracts Safe Harbor to be applicable, there must be a written agreement between the physicians and the Foundation. The agreement must be for a term of at least one year, and specifically describe the services to be rendered and the aggregate amount to be paid. Payment for services must be made at fair market value. Proposed regulations also require that the specific services to be rendered between the parties and the aggregate compensation are to be determined in advance in accordance with an arms-length transaction. In addition, compensation cannot be determined in any manner which is based on the volume or value of referrals for which payment is made, even in part, under the Medicare or State Health program.

The requirements of the Space and Equipment Rental safe harbor parallel those of the Personal Services and Management Contract safe harbor. The lease of space and equipment must be pursuant to a written agreement for a term of at least one year. Again, there must be a specific description of the space and equipment to be included, the payments must be based on fair market value and may not include any additional value for the location or convenience to sources of the Medicare or Medicaid business. The aggregate rental must be set in advance, consistent with an arms-length transaction, and not related to the volume or value of referrals for which payment may be made under the Medicare or State Health program.

Hospital purchases of physician practices are particularly suspect of violations of the Anti-Kickback laws. The Office of the Inspector General has expressed concern over these situations, because presumably, the hospitals often try to purchase physician practices as a way of retaining existing referrals or of attracting new referrals of patients to the hospital. Any remuneration made in this context implicates the Anti-Kickback laws because the remuneration paid for the physician's practice may constitute illegal remuneration to induce the referral of business reimbursed by the Medicare or Medicaid programs. Specific aspects of the transaction which mustbe closely scrutinized include:

- The total amount paid for the physicians' practices;
- The type of items for which the physician receives payment; i.e., payment for good will, payment for the value of an ongoing business; payment for the covenants not to compete; payments for exclusive dealing arrangements; payment for patient lists and patient records.
- The amount the physician receives as compensation for providing services after the acquisition; and
- The manner in which the physician is compensated for providing services after the acquisition.

If a particular transaction does not fall within one of the statutory exceptions or the regulatory safeharbors, then either the transaction is not intended to induce a referral which may be reimbursed by Medicare or Medicaid; it is a clear violation of the statute; or it may be some lesser violation of the statute in which case there is no clear way to predict the possibility of prosecution.

Next Month: Part 2 of this article discusses additional regulatory concerns on Physician Self-Referrals known as Stark I and Stark II, and the implications of the federal anit-trust laws.

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The Authors

Paul Vogel is a tax consultant in the Personal Financial Services Group of Price Waterhouse, LLP, in St. Louis, Missouri. **Helen Cripps** is a member of Cripps & Wright, LLC, Attorneys at Law, in Columbia, Missouri.

Otolaryngology Quiz #6

by Gary J. Nishioka, DMD, MD, Gregory P. Renner, MD, and Robert P. Zitsch III, MD
Division of Otolaryngology, University of Missouri - Columbia

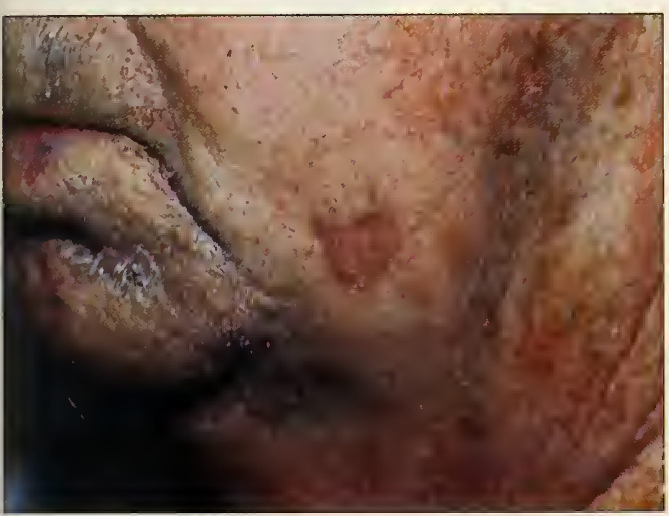

Figure 1

This 73-year-old man was referred to a dermatologist by his primary care physician for evaluation of his sun damaged skin and history of previous skin cancer. A head and neck skin survey showed marked generalized actinic changes over sun exposed areas, with a slightly depressed, flat, smooth, well-defined dark patch on the left lower cheek shown in Fig. 1. This area was asymptomatic and had gone unnoticed by the patient. A biopsy was performed. The patient was subsequently referred to otolaryngology for further management.

Which is the correct diagnosis for the skin lesion shown in Fig. 1?

a. Cutaneous lymphoma
b. Melanoma
c. Basal Cell Carcinoma
d. Traumatic Scar
e. Nevus

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

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Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER:
c. Basal Cell Carcinoma

The biopsy showed this lesion to be an infiltrating basal cell carcinoma. The purpose of this case is to emphasize that nonmelanotic skin malignancies, namely basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), can have a somewhat indolent appearance. A high index of suspicion of any skin lesion in an actinic damage setting is needed for early detection.

There has been a world wide increase in nonmelanotic skin cancer. A 11% and 51% increase in BCC and SCC, respectively, was seen between 1985 and 1990. The estimated lifetime risk of developing a nonmelanotic skin cancer in U.S. whites is presented in Table 1. The risk of developing a second BCC after diagnosis of the first BCC over the next 5 years is 45%. Therefore, lifelong surveillance is important after finding the first skin cancer.

Development of skin cancer is multifactorial and remains incompletely understood. Ultraviolet (UV) radiation is both mutagenic and immunosuppressive. Exposure to UV radiation in a genetically predisposed host, with or without oncogenic factors, sets the stage for development of most skin cancers.

Table 1.
Estimated Lifetime Risk of Developing a Nonmelanotic Skin Cancer in U.S. Whites

BCC	**Men**	**33%-39%**
	Women	**23%-28%**
SCC	**Men**	**9%-14%**
	Women	**4%-9%**

Selection of the most appropriate therapy depends on the type of skin cancer, its clinical and histological features, size and location of the lesion, whether it is primary or recurrent, and the needs of the patient. In high risk patients preventative therapy may also be required to help slow the rate of emergence of skin cancers.

Perhaps the most important point regarding skin cancer is that it is largely preventable. Skin protection and common sense sun exposure education must begin in childhood and be reinforced throughout the patient's lifetime.

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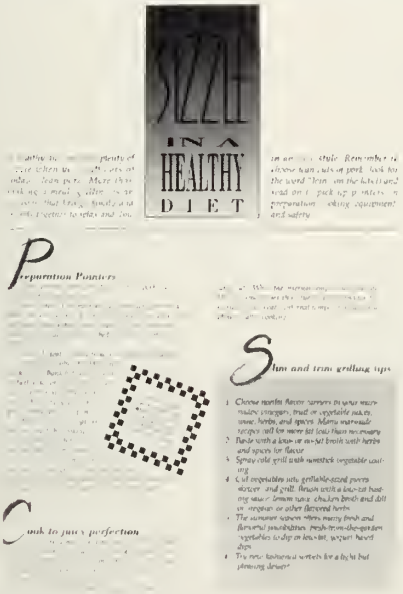

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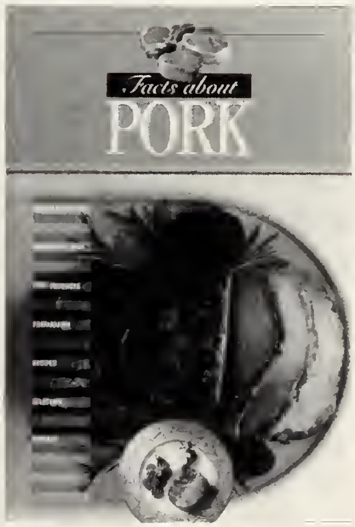

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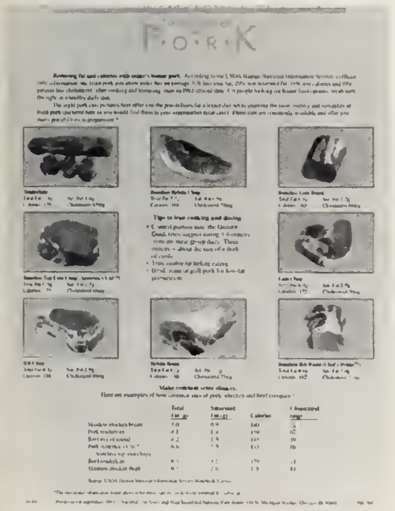

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HEDIS, What is it? What does it mean to me? How does it affect my practice?

Randall Treadwell, MD and Janet Treadwell, MSN

HEDIS stands for Health Employer Data Information Set. Purchasers of health insurance (employers) are demanding a measurement system to enable "apples-to-apples" comparison of health insurance plans. To attempt to satisfy this demand, the National Committee for Quality Assurance (NCQA) is developing HEDIS. A ten-member committee representing physicians, employers, and insurers initially developed version 1.0; continuous revision has version 2.5 in use currently, with version 3.0 due out in 1996.

HEDIS is intended to address issues of value and accountability deemed important by employers. These include:

- Quality
- Access & Patient Satisfaction
- Membership & Utilization
- Finance (health plan solvency)
- Health Plan Management

Data points addressing each of these elements have been established. The data is relevant, from an employer perspective, to the issues of quality and cost within the healthcare delivery system.

Physician Impact

All health plans need to collect the data required by HEDIS for use in marketing efforts and for accreditation by NCQA. Currently over 70% of HMOs are involved in collecting HEDIS measures. Some of the information can be collected from claims data which resides in payor databases--this has no impact on the daily operation of a practice. But, much of the data must be collected from chart and onsite office audits.

Audits are performed in individual physician offices by each of the health plans. Since many physicians participate in several different plans, the result is frequent visits to the office by auditors. Office staff time is required to pull medical records, conduct office tours (for evaluation of items such as handicapped access, restrooms, fire extinguishers, radiology equipment), and answer questions related to staff capability, training, and office procedures. For every audit, time is diverted to tasks necessary to meet the needs of the auditor. Also, space in the office needs to be set aside for use by auditors as medical records are reviewed.

An indirect impact of HEDIS are satisfaction surveys which are sent to patients. The physician will need to be aware information is being solicited from patients in order to be able to appropriately respond to questions or concerns directed to the physician by patients regarding the surveys. Patients are often concerned about confidentiality and how collected information will be utilized.

What Information Is Being Collected?

Access & Patient Satisfaction
- ✓office hours
- ✓office wait time
- ✓staff competency
- ✓safety
- ✓patient satisfaction

Preventive Services
- ✓childhood immunizations
- ✓cholesterol screenings
- ✓mammography screening
- ✓pap smears for cervical cancer

Credentials
- ✓ board certification
- ✓ hospital privileges
- ✓ state licensure
- ✓ malpractice insurance
- ✓ termination from health plans

Acute and Chronic Illness
- ✓ asthma ED visits
- ✓ inpatient readmission rate
- ✓ diabetic eye disease
- ✓ myocardial infarction

Utilization
- ✓ inpatient utilization
- ✓ high cost/frequency DRG's & procedures
- ✓ ambulatory care
- ✓ nonacute care
- ✓ outpatient drugs
- ✓ maternity/newborns
- ✓ mental health/substance abuse treatment

Quality Improvement
- ✓ disease management
- ✓ practice guideline use
- ✓ case management for specified conditions

Prenatal Care
- ✓ low birthweight
- ✓ prenatal care in the first trimester

Mental Health and Substance Abuse
- ✓ readmissions for treatment of major affective disorder
- ✓ substance abuse readmission rate

Summary

Collection of data to allow for fact based comparison of health coverage is needed. While the intent is commendable, one must contemplate how to deal with the stream of auditors coming into the office.

Another issue, proposed to be addressed in the 1996 version, is adjustment of the data for severity of illness. Physician-patient populations are not exactly alike and require severity adjustments to enable valid comparison.

Results of data analysis should be shared with the physician. Clarification with each health plan is necessary to ascertain if the analyzed data will be used in a punitive manner (deselection) or in a true CQI (continuous quality improvement) process to allow for identification of weaknesses and subsequent improvement.

Hopefully in the future it will be possible for HEDIS data to be collected by one organization with subsequent distribution of the information to the respective health plans. Not only would this decrease intrusions into daily operation of a medical practice, it would also result in a standardization of collection methodology among all health plans. Until the HEDIS process matures, it may be wise to address some of these concerns in the contract between the physician and health plan.

HEDIS can be of benefit not only to employers, but to everyone involved in the health care system - purchasers, patients, and physicians. The HEDIS development process must be closely monitored to be certain data collection is consistent and reliable, the data collected is meaningful, and the data analysis results are used to improve health care quality - not just for cost control and health plan marketing.

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The Author

The Treadwells reside in Chesterfield, Missouri, and work in managed care settings.

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Family Violence

Mary Beck, RN, MSN, JD

Abused women comprise up to 20% of women presenting with injury to hospital emergency rooms; up to 21% of women will be battered during pregnancy.[1] In total, 2% of all children, 3% of all wives,[2] and 4-10% of all elders[3] will be victims of domestic violence every year in America. Injury secondary to domestic violence is a diagnosis that physicians make every day. Lasting "treatment" extends beyond traditional medicine to involve the law.

Besides treating the injury, what can a physician do with a diagnosis of injury secondary to family violence? Here's one example:

"Joan" had been physically battered by her husband throughout their 28-year marriage. In the last episode, her husband closed Joan's hand in the car door, punched her repeatedly in her face, and threw her down on a bed precipitating the dehiscence of a recent surgical wound. What made this episode different from the many others in her marriage were the words of the physician in the hospital emergency room where she was treated. The physician told Joan that she did not have to tolerate domestic abuse, that she did not deserve it, and that no one had a right to hurt her. Joan had never heard these words before and they empowered her. The physician referred her to a mental health professional and explained to Joan where to file for an order of protection with the County Court. The Clerk of the Court who assisted Joan in completing her application also referred her to Missouri University School of Law Family Violence Clinic where petitioners, who qualify by income, were eligible for free representation by 3rd year Rule 13 certified law students acting under faculty supervision. Joan obtained an order of protection from the court which prohibited her husband from entry onto her premises and from further abusing or stalking her. Relief also included court ordered child custody, support, and visitation. One child was in college and the other was still at home. When her husband subsequently violated the order, he was arrested and jailed.

In Joan's case, the physician was not a mandatory reporter, however, his treatment of Joan put her on track to end a 28-year run of beatings. Under Missouri Statutes 210.115 and 656.188 respectively, physicians are mandatory reporters for child abuse (1-800-392-3738 - Division of Family Service) and

Continued on page 334

The Medical Legal Issue of the Month is a new column of monthly dispatches written by Missouri Bar members. The column will discuss a broad range of legal issues of interest to Missouri physicians. The contributors will be attorneys in various positions from all parts of our state.

The Medical Legal Relations Committee was assembled in 1988 by Maurice Graham, who was then the president of the Missouri Bar, for the specific purpose of improving collegiality among medical and legal professionals in the state. He formed a consortium composed of the Missouri State Medical Association, the Missouri Association of Osteopathic Physicians and Surgeons, the Missouri Hospital Association, and the Missouri Bar. The child of this consortium is the Annual Medical Legal Relations Symposium held every fall in Columbia. The different associations rotate leadership of this symposium. The inception of this monthly column attests to the consortium's desire to provide communication among legal and medical providers. Brief biographical sketches will be provided by authors who will respond to letters from readers.

Chair of the Missouri Bar's Medical Legal Relations Committee

Continued from page 333

elder abuse (1-800-392-0210 - Division of Aging). There is no mandatory reporting in Missouri for abused adults (as there is in some other states). But physicians may assist patients, like Joan, by encouragement and by referral for legal relief and protection via the courts.

The courts are involved in family violence primarily in three ways - criminal prosecution, juvenile court proceedings, and civil orders of protection.

Typically, the criminal system becomes involved in family violence when a report of domestic disturbance is made to the police. When answering such a call, police response must conform to RSMO 455.080. They must provide information to victims concerning orders of protection and available shelters; offer to transport a victim to a medical facility if they desire treatment; and offer to transport a victim to a place of shelter or safety. An arrest of the primary physical aggressor must be made where police have probable cause to believe that a person has committed a second violation of domestic abuse within 12 hours at the same address (RSMO 455.085).

While only a prosecuting attorney can bring criminal trial against an offender, charges may be dropped for lack of evidence where a victim refuses to testify at the criminal trial against the offender. A victim is likely to refuse to testify where she (and her children) are financially dependent upon the offender. Additionally, victims have reason to fear abusers when taking steps to terminate the relationship. Where offenders are prosecuted, the Criminal Court may order jail time for the offender, probation and parole, and/or counseling.

The Juvenile Court (also called the Family Court in some Missouri counties) typically becomes involved in family violence where a hotline call of child abuse is reported to the Division of Family Services (DFS) or where applications for child orders of protection are filed with the civil court. The DFS investigates hotline reports to determine whether they should be substantiated. If a hotline is substantiated, DFS will recommend that a case be filed with court. The Juvenile Division of Family Court Services investigates to determine whether there should be court intervention and then files petitions to exercise jurisdiction over a child believed to be abused or neglected, and an adjudication follows.

Relief generally available through the Family Court includes protective custody for the child, foster care, relative care, counseling, parenting classes, and other remedial services for the family. Where parents cannot afford an attorney to represent them, the Court will appoint an attorney. The Court always appoints an attorney, called a Guardian ad Litem, for abused and neglected children to represent their best interests. Attorneys so appointed receive modest reimbursement for their time, often $25/hour. If the parental conditions which brought the child under the jurisdiction of the court persist for services, a petition for termination of parental rights may be filed. Where parental rights are terminated, children become available for adoption.

The Civil Division of the Court becomes involved typically where a petition for an adult or child order of protection is filed under Missouri Statute 455, the Adult Abuse Statute. This title is somewhat misleading in that RSMO 455 is also available to protect children. The Adult Abuse Law provides civil remedies for domestic violence including ex parte and full orders of protection. "Ex parte" means without a hearing; "full" signifies a hearing with both parties present. The petitioner and the respondent must be at least 18 years of age, be related by marriage or blood, have lived together, have a child in common or respondent must be stalking petitioner. The procedures involved in obtaining an order of protection include the following:

1. Application: Petitioner can complete an application for her/himself and/or her/his children from the Office of the Circuit Clerk. After hours, on holidays and weekends, applications may be obtained from a police station. Once the petition is completed, the paperwork is delivered to the on-call Judge. A filing fee is not required at the time of filing.

2. Ex Parte Order of Protection: The on-call Judge may grant an ex parte order based upon the evidence in the petition prohibiting the respondent (alleged abuser) from abusing, threatening, stalking, or disturbing the peace of the petitioner or entering upon her/his dwelling. This order is in effect for about 15 days until the hearing.

3. Service: The sheriff serves the respondent with the ex parte order of protection so that he/she will be on notice that contact with petitioner is prohibited by court order and that a full hearing is scheduled for a particular day. Violation of the order results in a criminal charge and arrest.

4. Hearing: A hearing is held before a Judge in court so that Petitioner and Respondent may present testimony concerning the alleged abusive behavior. The Judge determines if a full order of protection should be issued. Sometimes, petitioner and respondent will agree to a consent order of protection prior to a hearing and presenting evidence to the judge will not be necessary.

5. Full Order of Protection: Based upon evidence at the full hearing, the Judge may issue a Full Order of Protection and decide which party is responsible for the court costs which vary by county from $0 to $100. The Full Order of Protection prohibits the Respondent from entry onto the premises of petitioner and from further abuse or stalking of the petitioner for 180 days. Relief may also include court ordered child custody, support, and visitation, counseling, payment of maintenance, rent, mortgage, counseling bills, medical bills, and division of property. The Order can be renewed two times if renewal application is filed prior to expiration of previous order.

Conclusion

The best statistics indicate that domestic abuse declined somewhat between 1975 and 1985, and scholars suggest that family violence is yielding to treatment programs, legal interventions, and changes in family structure that equalize the balance of power between husband and wife.[4] Nonetheless, a violent episode still occurs in 3 out of 10 marriages,[5] and the effects of this are grim. Over 50% of one-on-one female murder victims were killed by male partners.[6] Some 90% of juvenile offenders were either victims of child abuse or observed spousal abuse; and some 63% of all 11 to 20-year-old males in one study - who were incarcerated for homicide - had killed their mother's batterer.[7] The American Bar Association has formed a national interdisciplinary Commission on Domestic Violence and a prominent commission member is the president of the American Medical Association.[8] Working together, physicians and lawyers can effectively address society's complex and intractable problem with family violence.

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4. Straus, supra note 2 at 474-474.
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6. Missouri Coalition Against Domestic Violence. supra note 1 at 1-1.
7. Select Interim Committee on Children, Youth and Families, supra at 12.
8. ABA Forms Partnership with Doctors, Teachers and Law Enforcement Experts to help Domestic Violence Victims. St. Louis Daily Record, February 8, 1995, at 1 & 10.

The Author

Mary Beck, RN, MSN, JD, is a faculty member at the UMC School of Law where she directs the Family Violence Clinic wherein law students represent adult and child victims of domestic abuse. The Family Violence Clinic collaborates with the UMC School of Medicine Anger Clinic wherein psychiatric residents treat victims, abusers, and child witnesses of domestic abuse.

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Membership Notes

Leonard Berg, MD, professor of neurology & neurological surgery at Washington University, received a five-year grant from the National Institute on Aging for a research project titled, "Alzheimer's Disease Research Center."

George M. Bohigian, MD, an Ophthalmologist from St. Louis and AMA Delegate for MSMA, has been appointed as an AMA Representative on the Residency Review Committee for Ophthalmology beginning in January 1996. This committee plays an important role in maintaining the quality of graduate medical education for ophthalmology. The committee has representation from the American Board of Ophthalmology and the American Academy of Ophthalmology as well as the AMA.

Richard D. Bucholz, MD, associate professor of surgery in the division of neurosurgery at St. Louis University School of Medicine, has received a five-year contract from John Wiley & Sons, Inc. Dr. Bucholz will use the funding to hire support staff and produce the *Journal of Image Guided Surgery*, which will be available in both print and electronic editions. He will serve as editor in chief.

Dr. Bucholz is also the inventor of a surgical workstation which has been awarded a recent patent. The new patent describes the design of an optically-based stereotactic localization system that uses light emitting diodes (L.E.D.s) to track a surgeon's movements during surgery. Dr. Bucholz assisted in the design of the system by Surgical Navigation Technologies Inc.

George T. Grossberg, MD, professor and chair of the department of psychiatry and human behavior at St. Louis University School of Medicine, received a two-year contract from SmithKline Beecham Corp. He will study the efficacy and tolerability of a new medication for the treatment of patients with Alzheimer's disease.

Donald P. Hay, MD, associate professor of psychiatry at St. Louis University School of Medicine, has received a two-year contract form Bristol-Myers Squibb Co. Dr. Hay will investigate the safety and efficacy of the medication, Buspirone HCl, which has shown promise for decreasing agitation in dementia patients.

Marc D. Malkoff, MD, assistant professor of neurology at St. Louis University School of Medicine, has received a one-year grant from Sandoz Nutrition Corporation to study the nutritional needs of patients with subarachnoid hemorrhage.

Carl A. Petit, MD, was awarded membership in The American College of Physician Executives (ACPE), an educational and professional organization for physicians in medical management. Dr. Petit serves on the Planning and Development Committee of the Central Missouri Health Care IPA. He is organizing physicians in the Lake Ozark area, developing a community board, and will become an IPA official in September.

MSMA members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

IN MEMORIAM

Edgar Armistead "Armie" Belden, MD, 89, Jefferson City, Missouri, died March 27, 1995. Dr. Belden received his medical degree at the University of Pennsylvania in 1932. He was in private practice in Pennsylvania and Missouri until he joined the Missouri Department of Health in 1938 as a clinician in various counties. Dr. Belden received his master's degree in public health from Johns Hopkins University in 1947. He was assigned to the Missouri Department of Health headquarters in Jefferson City where he worked until his retirement in 1970 as director of communicable diseases. Dr. Belden was a diplomate of the American Board of Preventative Medicine and Public Health, he was a member of the Cole County Medical Society, the Missouri State and American Medical Associations, and the Missouri and American Public Health Associations.

Alvin Goldfarb, MD, 75, Creve Coeur, Missouri, died of a heart attack March 30, 1995. Dr. Goldfarb received his medical degree at Washington University in 1943. He served in the Army Medical Corps. Dr. Goldfarb retired last year from Parkcrest Surgical Associates of Creve Coeur, where he had worked for 12 years. He continued to work part-time for Healthline Corporate Medical Services. He was a general surgeon specializing in abdominal surgery. Dr. Goldfarb served for many years on the staffs of St. Louis University, Missouri Baptist and Jewish hospitals and had taught at the St. Louis University and Washington University medical schools. He was a member of the St. Louis Metropolitan Medical Society, American Medical Association, American Surgical Society, and International College of Surgeons.

Kenneth Glover, MD, 88, Mt. Vernon, Missouri, died after a long illness April 9, 1995. Dr. Glover received his medical degree at Washington University in 1937. He practiced for 43 years in Mt. Vernon during which he delivered nearly 2,000 babies and made it into *Ripley's Believe it or Not* for delivering three babies in three towns in a single day. Dr. Glover was a member of the American Academy of Family Physicians.

Thomas J. Hopkins, MD, 78, Sedalia, Missouri, died April 19, 1995. Dr. Hopkins received his medical degree at Temple University in 1951. He started practice in Sedalia in 1952. Dr. Hopkins had an active concern for the poor and served the Pettis County Health Center since its beginning. He was elected chairman of the board when the health center became a tax-supported facility. He was a founder and on the board of directors of the Children's Therapy Center. Dr. Hopkins served three times as chief of staff at Bothwell Regional Health Center and was president and chairman of the board of the Missouri Academy of Family Practice. He had been a fellow of the American Academy of Family Physicians since 1954 and a member of the 1993 Governor's Commission on Health Care.

Charles Jacobs, MD, 74, Grover, Missouri, died of leukemia May 7, 1995. Dr. Jacobs received his medical degree at Washington University in 1945. He served in the Army in the late 1940s in Japan and then practiced for several years in Grover, Missouri before opening an office in Ferguson, Missouri. Dr. Jacobs was an ear, nose and throat specialist from 1950 until he retired in 1993. He recently received his 50-year pin from the Missouri State Medical Association. Dr. Jacobs was on the staffs of DePaul Health Center in Bridgeton, Deaconess and Barnes hospitals, and Shriner's Hospital for Crippled Children in Frontenac. He also taught throughout his career at Washington University.

Clark H. Lentz, MD, 75, Prairie Village, Kansas, died May 25, 1995. Dr. Lentz received his medical degree at Temple University in 1945. He was in private practice in Concord, California for nine years before coming to the Kansas City area in 1957. Dr. Lentz worked for BMA from 1957 until he retired in 1981 as vice president and Medical Director. He was a member of Phi Chi Medical Fraternity. He served in the U.S. Navy from 1945 to 1948 in Hawaii and California. Dr. Lentz was a member of the Jackson County Medical Society and was honored by them as a 50-year physician. He was a member of the American Council of Life Insurance Medical Section and the Association of Life Insurance Medical Directors of America. He was Medical Director of Pyramid Life Insurance Company and also had an association with Mutual Benefit Life.

Roy H. Petrie, MD, 54, Clayton, Missouri, died of a heart attack May 17, 1995. Dr. Petrie received his medical degree at Vanderbilt University in 1965. He had headed the department of obstetrics and gynecology at the St. Louis University Medical School since 1992. Dr. Petrie was also the director of the department of obstetrics and gynecology at St. Mary's Health Center in Richmond Heights. Prior to these positions he was professor of obstetrics and gynecology and director of the program for maternal-fetal medicine at Washington University Dr. Petrie was cofounder and coeditor of the *Journal of Maternal-Fetal Medicine* and editor of the *Journal of Perinatal Medicine*. His research interests centered on intrapartum fetal surveillance and therapeutic pharmacology. He was listed in *The Best Doctors in America* in 1994.

William A. Slentz, MD, 77, Overland Park, Kansas, died May 29, 1995. Dr. Slentz received his medical degree at the University of Kansas in 1944. He served four years as a U.S. Navy Medical Officer. Dr. Slentz practiced medicine in Kansas City from 1948 until 1986. He was past president of the Kansas City Academy of Medicine, past president of the Southwest Clinical Society and a member of the Jackson County Medical Society, the Missouri State Medical Association and the American Medical Association. Dr. Slentz was past president of the Northwest Missouri Professional Standards Review Organization, vice chairman of the Executive Board of the Kansas City Blue Cross and Blue Shield, and vice president of Medical Plaza, Inc. He was a member of the American Society of Internal Medicine.

John M. Williams, MD, 74, Kansas City, Missouri, died May 12, 1995. Dr. Williams received his medical degree at Kansas University in 1957. He started practicing in Liberty, Missouri, in1958, practicing general medicine and allergy. He was on the staff of North Kansas City Hospital for 30 years and an associate staff member of Research Hospital. He was also an FAA Medical Examiner for many years. Dr. Williams is credited as the developer of the first corn extract as an Allergy antigen. In his general practice he estimated he had delivered about 800 babies. He conducted his practice more as a "country doctor" with no appointments and no limits on the time he allowed each patient. In 1938 he entered the Kansas National Guard and was activated in 1940. He transferred to the Army Air Corps in 1942 serving until 1945. He obtained the rank of Captain and was a B-24 and B-17 Heavy Bomber Pilot, Flight Commander and Instructor. He served from 1950 to 1953 in the Air Force as an Aviation Physiological Training officer. Dr. Williams was known for his complete metal machine shop. In 1965 he custom built a 500 lbs. lead lined isotope well counter for nuclear medical colleague and friend. He was a member of the Missouri State Medical and American Medical associations, Clay-Platte Medical Society, and the Association of American Physicians and Surgeons.

St. Louis Area Medicaid HMOs Discuss Managed Care Plus (MC+)

The Medicaid Managed Care program (MC+) will be implemented in stages across the state of Missouri.

In the St. Louis area the enrollment process began June 1, 1995. HMOs will be paid on a capitated basis by the State of Missouri Division of Medical Services (Medicaid). HMOs may pay physicians on a capitated or fee-for-service basis. Individuals have 30 days to change HMOs after enrollment. There will be an annual open enrollment period for those who choose to switch HMOs. MC+ will begin operations in St. Louis on September 1. The auto-assignment process will begin August 15. The remaining unenrolled population will be parcelled out according to the following percentages:

GenCare Health Systems, Inc.	26.146 %
Humana Health Plan	19.195
HealthCare USA - MO	11.485
CARE PARTNERS	11.422
Mercy Health Plans, Inc.	11.239
Community Care (Alliance for Community Hlth)	10.513
Prudential Hlth Care Plan, Inc.	10.000
Total	100.000 %

Patrick J. Mills, CPA, MBA, MSMA Director of Health Care Finance, compiled the interview questions for this article.

MoMed: The Medicaid population has always been considered one that is difficult to manage.
What has prepared your health plan for this group?
What is unique about your approach to servicing this population?

GenCare: At the outset of this discussion it's important to point out that we view providing health care services to the Medicaid population not as a difficult undertaking but rather as a distinct opportunity to utilize GenCare's unique capability of establishing provider networks, managing costs and creating quality assurance programs that ultimately result in the effective delivery of services to our members.

As a member of the United HealthCare Corporation family of services, GenCare enjoys the enviable distinction of instant access to resources of the nation's largest multi-state provider of Medicaid managed care services. United HealthCare first began serving Medicaid recipients in 1976 and today covers 350,000 Medicaid members in 10 states. United HealthCare's Medicaid experience not only in the area of effective service delivery but also in the critical administrative areas, such as information systems and claims processing, gives GenCare a significant boost in operating our MC+ product.

In many respects, GenCare's approach to serving this population is not distinct from our other managed care products. In fact, our approach to serving Medicaid members is consistent with our service to more than 230,000 commercial members - we will rely on many of the same providers who serve our commercial HMO members, and we will call upon many of our existing staff who are experienced in quality assurance, utilization management, provider relations, and member services.

GenCare also will put in place a system of matching primary care physicians with MC+ members who do not select a family doctor upon enrollment. This system will be linked to geographic and demographic data for members to facilitate appropriate access to physicians. In addition, we will build on existing systems of member education and provider orientation to see that particular health care needs, including prenatal care, immunization tracking, and routine screenings, are addressed appropriately.
- Thomas J. Zorumski, president and chief executive officer of GenCare Health Systems, Inc. and Physicians Health Plan of Greater St. Louis, Inc.

CARE PARTNERS: CARE PARTNERS represents a joint venture between Mercy Health Plan of Pennsylvania (MHP) and Partners HMO of St. Louis. MHP has more than twelve years of Medicaid specific managed care experience and MHP was the first Medicaid only managed care organization to receive National Committee on Quality Assurance (NCQA) accreditation. CARE PARTNERS, of course, benefits from the experience and expertise of MHP.

CARE PARTNERS
Helping You Stay Healthy

CARE PARTNERS recognizes that a non-traditional approach to delivering health care services to the Medicaid population is essential to affect positive outcomes. Not only are primary care and preventive care emphasized but important educational and outreach activities are essential to impact change. Provision of transportation services must not be underemphasized either. In total, a holistic approach to the delivery of health care services must occur.
- Alpha Fowler Bryan, MD, Executive Director of CARE PARTNERS

. . . .

Mercy Health Plans:
All too often, the Medicaid program has been designed to fail. By dramatically underpaying primary and specialty physicians, and by making it difficult and expensive for physicians to bill and collect for services, the Medicaid program has discouraged provider participation, and left beneficiaries with primarily institutional options (clinics and emergency rooms) to seek care.

MERCY
HEALTH PLANS

MC+ provides an opportunity to redesign the program, to increase the funding for physician services through improved efficiencies (not increases in total program cost), and to greatly improve access.

Mercy Health Plans is an active partnership of a licensed HMO, and providers (hospitals and physicians) who have long participated in the Medicaid program, and who are committed to improving it. Their knowledge, augmented by the experience of our key staff in managed Medicaid programs in other states, has prepared us for this radical transformation.

The active participation of our hospitals, physicians and community-based organizations in designing our system, the commitment of significant resources in health education, enhanced use of homecare, and continuing emphasis on the integration of all skill levels in the provision of care should help make Mercy MC+ an innovative, and demonstrably different plan contractor.
- Thomas Kelly, president and chief executive officer of Mercy Health Plans, Inc.

. . . .

HealthCare USA: HealthCare USA was launched two years ago in Jacksonville, FL, to provide health care services to the Medicaid population. With an experienced management team that implemented practical, innovative solutions to problems that have plagued the industry for years, their growth soared. Within a year, 27,000 members in 13 Northeast Florida counties had selected HealthCare USA to serve them.

This overall dedication to quality was rewarded in March, when the Florida Agency for HealthCare Administration evaluated 29 plans and gave HealthCare USA the #1 rating in quality. HealthCare USA met 98% of the quality care standards and was hailed as a managed care organization that did things right.

HealthCare USA is based on an integrated approach: comprehensive benefits, primary care management services, community-based preventive care services, an extensive and convenient provider network, customer-oriented member services and targeted promotional strategies. Specifically, Healthcare USA's success is based on Total Quality Improvement, both internally and externally, disease prevention and keeping members healthy in most appropriate setting convenient to members' homes, and a willingness to develop business relationships with high quality providers.

HEALTHCARE U·S·A
YOUR PARTNER FOR A HEALTHY FUTURE

- E. Leon Cooper, MD, Vice President and Corporate Medical Director of HealthCare USA. He is a pediatrician and nationally-known managed care executive, and is also a physician reviewer for the NCQA.

Continued from page 339

MoMed: The provision for non-emergency transportation is a unique aspect of this project, please elaborate on how you plan to address this issue.

GenCare: Transportation services are an important component of the program because they link patients to providers. Current plans call for the use of existing transportation services, including some public transportation as well as contracted providers. These services will be arranged through transportation coordinators who will be available both to providers and members to manage and coordinate rides as needed.

Mercy Health Plans: As you may know, the seven approved Medicaid plans are discussing a pooling of transportation funds, and a single region-wide transportation program. We endorse these efforts, and believe that they can offer a more cost effective and complete transportation program than would otherwise be available.

Should the efforts to pool transportation funds not be successful, Mercy is prepared to develop a centralized dispatch system for both emergency and non-emergency use, including ambulances, van services, taxis, buses and light rail.

CARE PARTNERS: CARE PARTNERS is working with several other plans to develop standardized protocols for non-emergency transportation.

MoMed: 24-hour access is a requisite, how can you achieve this at reasonable cost? What will you plan to do to promote primary care away from the emergency room?

GenCare: The truth of the matter is that 24-hour access increases the likelihood of reasonable costs. For example, GenCare currently provides commercial HMO members with 24-hour case management, which is designed to bring together providers and patients in an effort to develop an appropriate treatment plan for specific cases. Typically, case management incorporates cost-effective use of resources and consequently reduces dependence on expensive emergency room care.

One of the most significant features of the managed care program for Missouri's Medicaid recipients is the member's link to a primary care physician. For the Majority of MC+ members, this link will be the first time they have consistent access to a private doctor who provides or arranges their medical care. Given this level of access, which is routinely supported through physician exchanges and provider backups, it is anticipated that care will be sought increasingly through the physician - rather then emergency room.

Further, GenCare's 24-hour NurseLine service will give members access to professional staff who can answer health-related questions or concerns *anytime*. In many instances, registered nurses will help patients understand more about appropriate use of emergency rooms.

CARE PARTNERS: Not all requisites will necessarily be achieved at reasonable costs and it is impossible to say at this time that 24 hour access is one of them.

CARE PARTNERS will initiate a number of outreach and educational programs. Assigning a recipient to a primary care provider is an essential feature of the program. The member handbook explains to the recipient that his or her primary care provider is to be contacted prior to emergency room visits. Additionally, CARE PARTNERS will encourage the recipient's participation in important educational classes including parenting skills and newborn care. Frequently an emergency room visit can be diverted through appropriate contact with a triage person or sometimes simple knowledge of parenting skills and newborn care.

Mercy Health Plans: Cost effective 24-hour care will be a particular challenge in St. Louis because of a shortage of primary care physicians, and the infrequency of expanded office hours. Whatever we do, however, will be less expensive than the traditional dependence on emergency room care. Mercy MC+ plans to utilize a 24-hour nurse triage service to assist Medicaid enrollees in choosing the right level of care, and to provide basic education on health problems.

MoMed: Please discuss your plans and efforts directed toward patient education and changing personal behavior toward a more healthy lifestyle.

GenCare: Throughout the first year, our emphasis will be on encouraging members to take advantages of preventive and educational services that are available to them through GenCare MC+. For example:

1. Female plan members will be reminded about the benefit of seeing an OB/GYN each year for a well-woman exam.
2. Pregnant women will be offered an incentive to call our OB case manager so that we can educate them about appropriate prenatal care and track cases that may result in premature births.
3. Parents will be notified about the importance of keeping up with immunization schedules and encouraged to take their children to the doctor for early periodic services, diagnosis and treatment (EPSDT) visits.

In addition, we are working currently to develop cooperative relationships with a number of existing local resources, such as public health, school and community as well as hospital programs, with whom we intend to establish joint educational services for GenCare MC+ members. To encourage member participation, we will assist with transportation and offer incentives for attendance when appropriate. Ultimately, removal of barriers to learning about healthy life-styles combined with sufficient incentives as well as intrinsic rewards from improved health should result in effecting positive changes among Medicaid recipients.

CARE PARTNERS: As eluded to in earlier questions, CARE PARTNERS will emphasize patient education. Educational classes will concentrate on prenatal services, parenting and newborn care classes and asthma education. We recognize that there will be a tremendous learning curve involved and therefore concentrating on a few key areas rather then trying to implement too many programs is important.

Mercy Health Plans: Patient and family education efforts will include childbirth and parenting classes, family planning, self care, and managing chronic diseases (asthma, allergy, diabetes, hypertension, and the like). Mercy MC+ will develop and offer educational programs in convenient community facilities, will co-fund educational efforts of community support groups, will make pre-recorded education audiotapes available at participating facilities and via the nurse call line, and will provide education in conjunction with home-based and clinic-based medical care.

HealthCare USA: Numerous educational components are used including small group orientation, a "how-to" videotape that stresses the need for patient compliance and close physician-member interaction, printed materials, special programs (such as smoking cessation and weight control classes) and health fairs. In addition, members with chronic conditions are targeted for close supervision and special education.

Members in the St. Louis are will receive at least three additional preventive care benefits. Registered nurses will be on call 24 hours a day to handle questions if the primary care physician is not immediately available. They will attempt to contact the primary care physician and/or direct the member to the most appropriate place of care.

HealthCare USA also is providing all members with their own personal voice mail service. This will allow physicians or other health professionals to leave messages for their patients and give HealthCare USA direct, quick access to each member. The voice mail can be used to remind patients about an appointment, alert mothers of the need for specific immunizations, tell patients with chronic conditions about an upcoming educational event, or survey members. The automated phone system even allows members to access a "voice" bulletin board so they can gain support from other members who are undergoing similar problems.

Another example of going directly into the community is the Doc Bear Club for Kids, which is making significant strides in helping young members achieve greater success in life through involvement in safe, fun, educational activities. For instance, HealthCare USA pays for memberships in youth organizations such as Boys and Girls Clubs.

Continued on page 342

Continued from page 341

MoMed: Medicaid managed care is still a relatively new product. Describe the biggest opportunity and the biggest pitfall you see in getting involved in the Medicaid managed care business.

GenCare: Because of GenCare's long-term commitment to the "care coordinator approach" in which a member chooses a primary care physician who provides, arranges or oversees a majority of care, we see a tremendous opportunity in bringing Medicaid recipients much closer to a single caregiver than they have ever been before. This link with a primary care physician not only addresses Medicaid recipients' concerns at having been shuffled about in the medical maze but, more importantly, allows for improved access to health care combined with more consistent delivery of services.

At the same time, we recognize the challenges in reaching Medicaid recipients, who historically have experienced social and health-related problems associated with low income, and educating them about their role in assuming responsibilities for managing some aspects of their own health care. Nevertheless, we see our role as a catalyst for change. By bringing together physicians and community resources, GenCare's mission is to bring about new attitudes, new behaviors and new results that will lead to improved health for Medicaid recipients.

Mercy Health Plans: While Medicaid managed care is new to Missouri, outstanding programs have existed for more than ten years. We have the opportunity to learn from these programs' success and failures. The biggest opportunity in Medicaid managed care is the improved health status of the population with earlier and easier access to basic medical services, and a focus on health enhancement. The biggest pitfall is lacking the courage or the energy to assist the restructuring of the current delivery system, or allowing ourselves to underestimate the capacity and interest of the Medicaid enrollee in better, more accessible, more routine and timely healthcare.

CARE PARTNERS: Because Medicaid managed care is a new business, the biggest opportunity is to serve as a pioneer in impacting positive outcomes for a population that has historically been underserved. The biggest pitfall, likewise, is related to the infancy of Medicaid managed care, i.e. poor data and therefore lack of experience and history to impact successful change.

MoMed: As a condition of participation, you must report on qualitative factors. Please describe your system for compliance.

HealthCare USA: HealthCare USA not only seeks out the best employees, it seeks the highest quality providers. In turn, these professionals design and implement systems that allow both to do their jobs better, together.

For instance, all HealthCare USA physicians undergo a strict credentialing, office and medical record review. Quality of care is monitored and trended on a continuous basis. For physicians, this is an opportunity to connect with a system that spans the entire continuum of care, from prevention and patient education to follow-up care and ongoing health maintenance. Data analysis (such as EPDST tracking systems), practice guidelines, physician education and outcome assessments are key components.

Both patients and physicians are regularly surveyed, with appropriate alterations made. First-class customer service is given to both groups, with toll-free lines and empowered staff members ready to solve problems or answer questions as quickly as possible.

CARE PARTNERS: CARE PARTNERS will have an aggressive quality assurance program. In as much as the state has not delineated which qualitative factors must be tracked, it is not possible to describe our system completely.

Mercy Health: As part of its managed Medicaid program, the state of Missouri requires Mercy MC+ to measure Early Periodic Screening and Diagnostic Testing (EPSDT) compliance, the ratio of vaginal and caesarean births, the percentage of low birth weight babies, and a variety of other quality indicators. Much of this information is collected routinely via encounter reporting. To encourage improved EPSDT compliance, Mercy MC+ will make a supplemental payment ($10 per screening) upon receipt of either a copy of the screening report, or other acceptable documentation.

Mercy's emphasis on quality measures is substantially broader in scope than that required by the state, and will include outcome-based performance assessment of all participating physicians and hospitals, across all patient populations, including Medicaid.

GenCare: GenCare currently works with physicians who participate in the commercial HMO network on the development and implementation of systems designed to address quality of care issues, including tracking systems for prenatal care, childhood immunizations and well woman care. We are in the process of enhancing many of these systems to fit our MC+ product and also developing new systems in compliance with the state of Missouri's requirements.

MoMed: What considerations will be given to physicians currently treating Medicaid patients?

GenCare: GenCare has sought participation from both existing Medicaid providers and those who have not cared for Medicaid recipients previously. Providers who currently participate in GenCare's commercial HMO network have been invited to be part of the GenCare MC+ network. We believe our network offers a unique blend of providers and continue to explore opportunities with public health and federally qualified providers.

In our commercial HMO, GenCare consistently works with physicians to orient them to company systems and procedures and we also seek their input through focus groups and panel discussions on issues of interest to them. This practice will be continued with physicians who participate in the MC+ network, and a series of focus groups will be conducted to identify common issues that can be resolved to participants' satisfaction.

HealthCare USA: HealthCare USA has a willingness to develop business relationships with high quality providers, such as public hospitals, teaching hospitals and large physician groups. This may involve equity and risk-sharing arrangements as well as assistance in reorganizing for Medicaid managed care.

Mercy Health: While we believe that Medicaid managed care is an important way to broaden the primary care delivery system for enrollees, we also support the state's efforts to protect the opportunity to participate by traditional providers of Medicaid services. In forming our provider network, Mercy has included city and county clinics, St. Louis Regional Hospital, Cardinal Glennon Children's Hospital, and the many agencies of Catholic Charities, all of which are important traditional providers of care to the Medicaid population.

CARE PARTNERS: CARE PARTNERS is interested in including in its network those providers who have historically served the Medicaid population. We wish to emphasize continuity of care and are encouraging those physicians who have high volume Medicaid to participate in our network.

The three successful Medicaid bidders not included in this article: **Humana Health Plan**, **Community Care (The Alliance for Community Health)** and **Prudential Health Care Plan, Inc.**, *were not able to respond before the publication deadline for* Missouri Medicine.

Video medical stories begin State syndication

MSMA - Health Education Foundation (MSMA-HEF) in late June expanded the distribution of the Association's medical news programs to three new television stations around the State. Syndication of the videotaped healthcare stories now reaches audiences in the Jefferson City/Columbia and Springfield, Missouri areas, with coverage scheduled to air in the Kirksville market in late August. This distribution is in addition to coverage in the St. Louis area that began in May.

"Our goal is to saturate every market in the State with MSMA friendly stories," said Dennis Weiser, staff producer of the series. "We have an excellent shot at accomplishing this because we are supplying top quality productions, have 'local' angles, and provide useful healthcare information."

The networks have state of the art production capabilities, with access to real time global reports, but it seems they love to report on the latest outbreak of a terrible virus, medical horror stories, malpractice rewards, Medicare fraud, and the up-to-the-minute death count at Dr. Jack Kevorkian's clinic ... Weiser believes their stories add up to a negative message about physicians and healthcare in America over an extended period of time.

A track record is important for syndication success. Competition for commercial TV station air time comes mainly from high quality national syndicators and network medical reporters, Weiser noted. "Americans are very health conscious and have come to demand ongoing news coverage of health topics," he said. "Station managers understand this appetite for medical news, but they also expect any new material they consider running to be at the same high technical level that is set by the national news providers. Even the smallest commercial station's audience measures what they see on their screens against news feeds that come from New York or Washington."

National news providers may set high technical quality standards but Weiser believes their stories add up to a negative message about physicians and healthcare in America over an extended period of time. "The networks have state of the art production capabilities, with access to real time global reports, but it seems they love to report on the latest outbreak of a terrible virus, medical horror stories, malpractice rewards, Medicare fraud, and the up-to-the-minute death count at Dr. Jack Kevorkian's clinic."

"Our goal is to saturate every market in the State with MSMA friendly stories," said Dennis Weiser, staff producer of the series. "We have an excellent shot at accomplishing this because we are supplying top quality productions, have 'local' angles, and provide useful healthcare information."

MSMA-HEF provides alternative stories. The focus is on treatment success stories, medical research trials that hold promise, and tips for preventing healthcare problems and how individuals can improve their odds of living a healthy lives. "We're not Pollyannaish about it," Weiser said. "Our stories are based on studies taken from the pages of *JAMA*, *The New England Journal of Medicine*, and other such creditable sources."

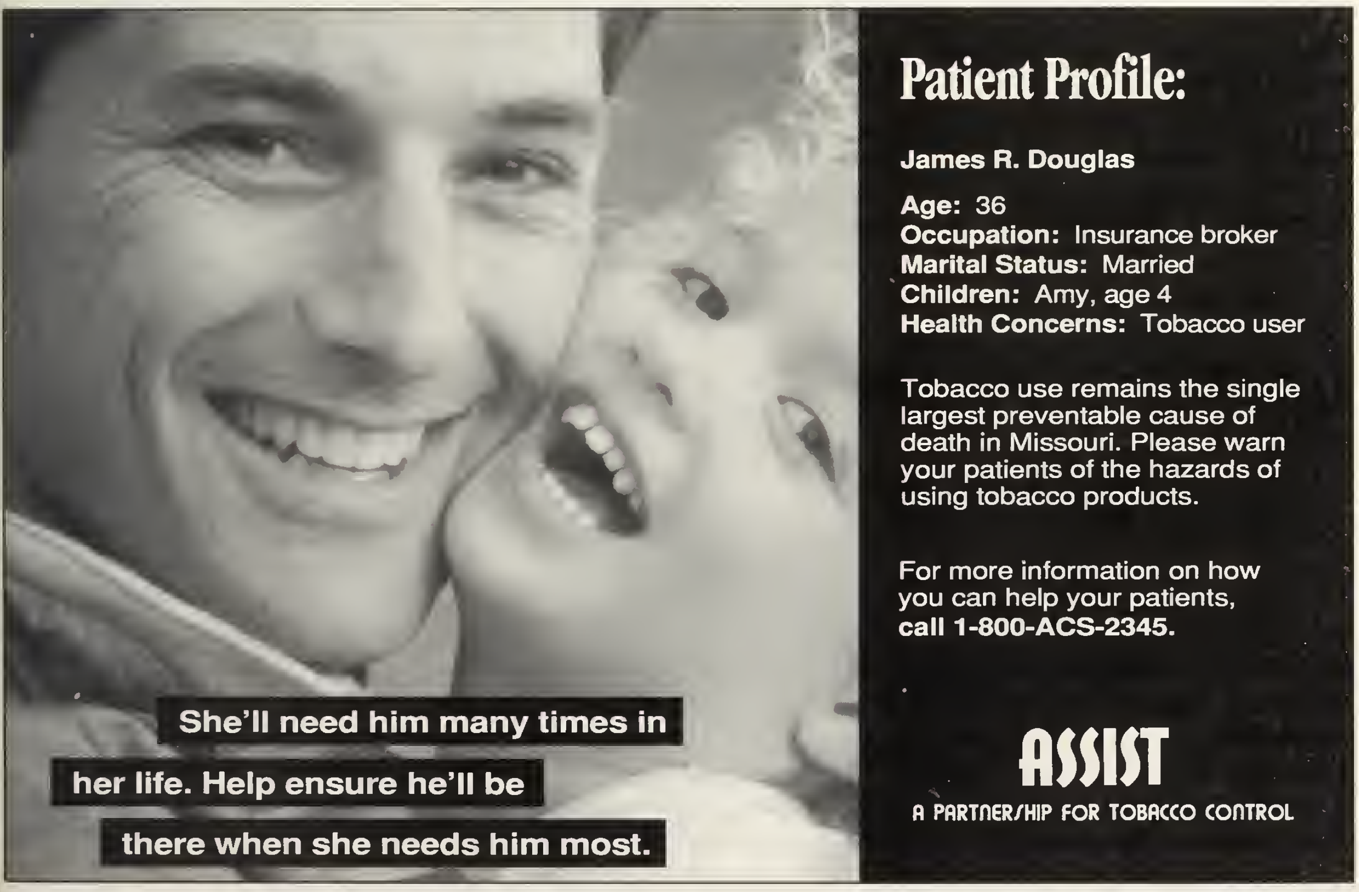
Weiser noted that the main difference between the material being produced by the Association and stories from the national media is not that one source is more scientifically accurate than another, but that MSMA-HEF concentrates on the positive aspects of medical care rather than seeking out aberrations in the system. "We can't stop TV and print coverage of horror stories - such as a surgeon operating on the wrong part of a patient's body - that's news.

What we can do however is tell stories like the one about a young girl who was born with a serious leg bone problem (at birth, her left leg was doubled back upon itself like ahair pin). She got free treatment at the St. Louis Shrinner's Hospital from a dedicated physician and medical team that straightened her leg and it is now growing at the same rate as her other leg. Our stories may not be as sensational as the Eboli virus reports that came out of Africa recently, but we're beginning to add some balance to the State's otherwise cockeyed coverage of healthcare happenings."

News directors are being offered exclusive use of the stories within their station's immediate coverage area. In exchange for their right to use the material, the station must agree to use the stories each week in their local news broadcasts. Broadcast times do vary in different markets. KRCG in Jefferson City airs the inserts during their 10 PM and Noon broadcasts. KOLR in Springfield opted to include the stories in their 5 PM news show. KSDK, St. Louis, uses the inserts as part of their highly rated morning news hour.

The stations' announcers credit the Missouri State Medical Association for providing the story as part of each introduction to the piece. Further credit is given during each story's airtime by running a tag line (called a 'CHRYON') under Dr. Regan Thomas' name that identifies him as being a reporter for the "Missouri State Medical Association." Thomas is the medical director for the new video project. He also serves as Editor of *Missouri Medicine*.

This program is being supported by MSMA's members as part of the increased emphasis placed on internal and external communications by the House of Delegates at the 1994 Annual Meeting. Additional support for the program is being sought from vendors and institutions that share the Association's commitment to this highly effective method of distributing medical information to the general public. MSMA members associated with foundations or boards that make contributions to worthy health education projects are invited to contact the MSMA office. MoMed


She'll need him many times in her life. Help ensure he'll be there when she needs him most.

Patient Profile:

James R. Douglas

Age: 36
Occupation: Insurance broker
Marital Status: Married
Children: Amy, age 4
Health Concerns: Tobacco user

Tobacco use remains the single largest preventable cause of death in Missouri. Please warn your patients of the hazards of using tobacco products.

For more information on how you can help your patients, **call 1-800-ACS-2345.**

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Lyme and/or Lyme-like Disease in Missouri

Edwin J. Masters, MD and H. Denny Donnell, MD, MPH

Missouri patients who fulfill the strict CDC surveillance definition for Lyme disease have been reported in significant numbers since 1989, although there are no viable Missouri human cultures of *Borrelia burgdorferi*. The Missouri erythema migrans rashes are indistinguishable from those in other areas, and the clinical syndrome appears similar to Lyme disease nationally. The authors suspect atypical *B. burgdorferi*, and/or other *Borrelia* spirochetes of causing this clinical borreliosis syndrome.

Missouri patients who fulfill the strict CDC surveillance definition for Lyme disease have been reported in significant numbers since 1989. The etiology has been unclear and confusing. This enigma was previously addressed in this journal in 1992.[1]

The clinical syndrome is better defined, but the exact etiologies are unproven. We participated with the Centers for Disease Control and Prevention (CDC) on an epidemiologic and diagnostic study of 45 Missouri patients with physician diagnosed erythema migrans (EM) (considered a diagnostic marker for Lyme disease). This study will be published in the August issue of the *Journal of Infectious Diseases*.[2] The CDC conclusion was that the etiology remains idiopathic, but that evidence implicating *Borrelia burgdorferi* is absent. The study design, exclusion of available information, decisions excluding data relevant to the objective evaluation of the problem, and arbitrary authorship were such that we, as the state epidemiologist who initiated the study and the primary clinician who supplied over half of the study patients, took the significant step of declining authorship. We believe that additional information should have been made available.

Visually, Missouri EM rashes are indistinguishable from those associated with Lyme disease elsewhere. Many authors consider erythema migrans pathognomonic for Lyme disease.[3-14] Photographs of Missouri EM rashes have been published in peer reviewed journals[15-17] and have been presented at the last three international conferences on Lyme Borreliosis (Stockholm, 1990;[18] Arlington, VA 1992;[19] Bologna, Italy 1994[20]). Missouri case data show an EM incidence with a summer peak, and rash location on the body, histology, treatment response, incubation time, tick exposure, age, gender, multiple lesions, associated signs and symptoms, and sequelae are all similar to Lyme disease reported nationally. Thus, clinically, the Missouri physician cannot distinguish this rash and syndrome from Lyme disease diagnosed elsewhere. If Lyme disease is a clinical diagnosis, as the world's literature and the CDC state,[21] then this is clinical Lyme disease.

Atypical isolates of *B. burgdorferi* have been cultured from *Ixodes dentatus* ticks in Southeast Missouri.[22] Live motile spirochetes, similar to *Borrelia*, have been visualized in lone star ticks (*Amblyomma americanum*) from the homesites of Missouri EM patients. Further intrigue is added by the growing evidence that some *A. americanum* (lone star ticks) are infected with a very different and as-yet - unidentified spirochete that may be a completely new species of *Borrelia*.[2] One then ponders the question whether this syndrome is caused by a new species of *Borrelia* that is not *B. burgdorferi*; is it, or is it not, Lyme disease if it cannot be distinguished clinically? There are arguments on both sides, depending on whether one makes the diagnosis microbiologically or clinically. For example, the putative etiologic agent for cat-scratch disease has changed from *Afipia felis* to *Bartonella henselae*, and yet the clinical diagnosis remains the same. To use a *Borrelia* analogy, there are numerous *Borrelia* species that cause relapsing fever, both tick borne and louse borne, and yet the diagnosis of "relapsing fever" remained. The issue of a possible different *Borrelia* bacteria in lone star ticks is significant. What is different about Missouri EM patients is that a minority accurately describe the lone star tick as being associated with their clinical Lyme disease. This has also been reported in other states, but the extent to which this may occur is unknown.[23]

Case Report

Case illustration (CDC #6, ID #111): This case illustrates why a borreliosis is suspected in Missouri. A 41-year-old white man presented on July 5, 1991 with an EM rash (Fig 1) which was painless, non-pruritic and with documented expansion. There was no history of recent tick exposure outside Missouri.

Laboratory findings: A biopsy was taken and he was enrolled in a national study. The EKG on July 5, 1991 was normal. An EM rash biopsy photo (Fig 3) shows histology consistent with erythema migrans, and (Fig 2) shows a modified Dieterle stain of the EM biopsy with a dermal spirochete visualized by Dr. Paul Duray of Harvard.

On July 12, 1991 his electrocardiogram showed atrial fibrillation which resolved spontaneously. All subsequent

Table 1 - Testing by CDC

CDC Case #6	1991 WCS +>1.0 (3SD)	1991 FLA +>1.0 (3SD)	1992 FLA +>1.0 (3SD)	1993 FLA +>1.0 (3SD)	IgM Western Blot	IgG Western Blot
Day 8	2.278	1.394	1.022	0.81 (equiv)	41	**25, 28,** 36,41, 57, 60, 62
Day 36	2.260	1.354	1.025	0.82 (equiv)	**66**	**15, 25, 28**, 34, **41**, 56, 62

EKG's with over a three year follow up have been normal. Blood Pressure = 112/78; Cholesterol = 165; Glucose = 102; T4 = 7.6; serum ferritin < 200, normal weight, no personal or family history of heart disease and normal echocardiogram. His only medication was amoxicillin 500 mg TID.

Other tests include a positive Lyme ELISA by Dr. R.J. Johnson, of the University of Minnesota, negative RA, negative ANA, negative RPR, and a positive biopsy by Dr. Paul Duray of Harvard (now at the NIH).

Discussion

Eight ELISAs were done by the CDC and none was negative (Table I). The Western blots were indeed negative by Dressler's criteria,[24] but positive by other published criteria.[25-27] We disagree with the CDC and do not believe this case constitutes "absence of evidence" of serological reactivity to *B. burgdorferi* or a related spirochete. Furthermore, not only were positive CDC FLA ELISA results omitted from the JID manuscript,[2] diagnostically significant less intense Western blot bands by the CDC's own research data[28] were ignored. Knowing that atypical *B. burgdorferi* or "related spirochetes" might very likely produce a response such as this, we disagree with the CDC conclusion of "no evidence." We also know that "most patients with early disease have a good IgG response, and some reinfected patients may have only an IgG response."[25]

Considerable information consisting of test results and information, histology results, and complications were all excluded in the CDC analysis. Very few pathologists have published on the histopathology of Lyme disease. Four of these published experts have reviewed Missouri EM cases and all four (Dr. Duray, Harvard; Dr. DeKoning, Netherlands; Dr. S. Granter, Harvard; and Dr. A. MacDonald of Beaumont, TX) agree that both histology consistent with Lyme erythema migrans and spirochetes which appear similar to *Borrelia* are present in Missouri rash biopsies.

The incubation time of the Missouri EM rashes is important because of the etiological implications. On a questionnaire of 20 Missouri patients in the CDC study, the incubation time differed from that contemporaneously recorded in the patient's charts (3 days vs. 5.5 days).[2] Based on that, one might improperly conclude that the chart data were inaccurate. However, the chart data were entered before the CDC study was even begun. Additionally, the differences were due to discrepancies in only four patients where there were long delays of up to a year between the rash and the questionnaire. The chart data were also verifiable by third parties. Furthermore, 10 of these 20 CDC study patients were a subset of 25 consecutive Missouri erythema migrans patients that were included in a national study. They were documented exhaustively long before the CDC study began. The median incubation time for that larger series of 25 patients was seven days, exactly what one would expect. In 1993, the Missouri Department of Health collected data on 30 other consecutive erythema migrans patients from all over the state and the median incubation time was 6 days. The published incubation times usually vary from 2-30 days with a median of 6 or 7 days. Another series of 14 EM rashes following witnessed lone star tick bites (including three of the CDC study patients) had a median incubation time of 7 days.[20] Although the short 3 day time on the CDC questionnaire might support a suggestion for hypersensitivity reaction or other noninfectious cause of these rashes, we believe that data to be inferior, incomplete, and contradicted. Also, the mean duration of the EM rashes following known tick bites in the CDC study was 14 days, arguing against a hypersensitivity reaction as does the median duration of rash expansion of seven days reported by 31 CDC study cases.

There was no correlation between documented Missouri rash size and reported duration. However, with the known impact of treatment on EM rashes and the considerable variation in antibiotic therapy the lack of correlation is not surprising.

We also disagreed with the arbitrary exclusion of available histopathology evaluations of biopsies on EM study patients. These biopsies clearly exclude such entities as granuloma annulare, etc. Obviously, there are probably some instances where a hypersensitivity reaction could be mistaken for an erythema migrans, but that is a completely inadequate explanation for the phenomenon that is being reported in Missouri. Many have had tick bites all their lives and have never had a similar rash. Also many have been followed for several years since their erythema migrans rashes, have had further tick bites, and have had no further rashes. The vast majority of these clinically diagnosed erythema migrans simply cannot be explained as hypersensitivity reactions or toxic phenomenon, based on clinical data, histopathological examinations, clinical history, and follow up.

The absence of a viable human *B. burgdorferi* culture in Missouri is significant. However, absence of proof is not proof of absence and with an organism such as this where increasing heterogeneity is being found, we do not know for sure that atypical variants do not have some atypical growth requirements. This phenomenon exists in other areas and has been reported in Great Britain[29] and also in the northeastern U.S.[30] Also, at least one uncultivable (at least by present methods) organism that may be a *Borrelia* probably exists in lone star ticks.[2] We caution against using the criteria of failure to grow in a highly defined specific medium such as BSK-II as proof of nonexistence. Even

Continued on page 349

Table 2.

Results of tests for antibodies to *Borrelia burgdorferi* in serum from Missouri patients with suspected erythema migrans (all patients of Dr. Masters) by enzyme immunoassay (EIA) using whole-cell sonicated (WCS) antigens and flagellar (FLA) antigens and immunoblots performed by the CDC. Bold print indicates strong bands.

CDC Case #	Samp. #	Pt ID#	Days After Rash	1991 WCS +=>1.0 (3SD)	1991 FLA +=>1.0 (3SD)	1992 FLA +=>1.0 (3SD)	1993 FLA	IgM Western blot	IgG Western blot
17	1355	125	37	0.38	0.575	0.192	0.16	39,66,75	ND
11	1358	136a	27	0.552	0.443	0.375	0.23		35, 41, 52, 60, 75
11	1359	136b	100	0.677	0.689	0.204	0.18		15, 25, **37, 41**, 45, 60, 62, 75
18	1360	119	16	0.38	0.396	0.257	0.29	41	**29, 41, 45, 57**, 62,**75**
1	1362	116a	3	1.432	0.519	0.591	0.55	41	**28, 37, 39, 41, 45, 58**, 66
1	1363	116b	34	1.690	0.434	0.678	0.51	ND	**15, 39, 41, 47, 56, 58**
1	1364	116c	97	1.425	0.721	0.638	0.54	**66**,75	**15, 39, 41, 47, 56, 58**
3	1371	121a	5	0.811	0.434	0.731	0.15		25, **41** ,45, **57**, **62**
3	1372	121b	46	1.116	0.387	0.700	0.21	31, 45, 58	**15**, 25, 29, **41**, 45, **57, 62**
12	1374	137a	22	0.953	0.575	0.449	0.73	**41**	25, **34, 41**, **56, 66, 75**
12	1375	137b	119	0.833	0.415	0.344	0.54		15, **42**
19	1380	138	54	0.507	0.179	0.272	0.18	**41, 60, 66, 75**	**41, 62, 68**
13	1382	103a	30	1.118	0.472	0.378	0.37	**41**	30, **41**
13	1383	103b	58	1.082	0.557	0.344	0.41	66, 75	15, **29, 41**
4	1385	145a	19	0.398	0.274	0.214	0.23	**62, 63, 64**	**21, 34**, 37, 41, **60**, 62
4	1386	145b	38	0.626	0.358	0.307	0.19	39, **63, 64**, 75, 83	15, **34**, 41, 60, 62
5	1388	105a	4	0.686	0.538	0.295	0.21		**29, 41**. 62
5	1389	105b	32	0.809	0.528	0.283	0.27	41	29, **41**, 62
14	1397	117a	31	1.846	0.792	0.488	0.39	**41, 66**	**34, 41**, 62, 66, **75**. 83
14	1398	117b	92	1.836	0.623	0.519	0.31	**37**, 39, 41, **58, 66**	15, **21, 34**, 41, **62, 75**, 83
2	1404	118a	3	2.694	0.772	0.234	0.22	41	18, 29. 37, **41, 45**, 57, **66, 75**
2	1405	118b	35	1.931	0.668	0.301	0.28	41	18, 37, **41, 45**, 57, **66, 75**
2	1406	118c	185	0.900	0.435	0.193	0.25	34	**15**, 37, **41**, 45, 57, **66, 75**, 83
6	1407	111a	8	2.278	1.394	1.022	0.81	41	**25, 28, 36, 41**, 57, 60, 62
6	1408	111b	36	2.260	1.354	1.025	0.82	**66**	**15, 25, 28**, 34, 37, **41**, 56. 62
20	1410	131	99	0.364	0.292	0.481	0.13	25, 37, 66	**29, 41**, 62, 83
7	1411	132a	3	0.318	0.340	0.280	0.3	41, **75**	15, 18, **41**, 75, 83
7	1412	132b	31	0.440	0.321	0.295	0.21	**79**	**41,75**,83
8	1415	140a	3	0.835	0.406	0.314	0.35	**25**, 41, 83	**15, 28**, 29, 36, 39. 41, **62**
8	1416	140b	94	1.096	0.415	0.197	0.18	**25**, 37, 60, 66, 83	**15, 28, 29, 37**, 41, 60, **62**
15	1418	141a	1	1.207	0.783	0.386	0.23	**41**	28, **30, 35, 41**, 45, 62
15	1419	141b	24	0.587	0.425	0.380	ND	**41**	**30, 35**, 36, **41, 45**, 62
15	1420	141c	176	0.716	0.443	0.324	0.27	41, 58, 60, 66, 83	**15, 29, 30, 41, 62**
21	1424	133	94	1.606	1.087	0.693	0.64	83	**41**
9	1425	113a	3	0.452	0.106	0.130	0.13	**41**	**15**, 25, **34**, 41, 57
9	1426	113b	33	0.782	0.821	0.546	0.29	41	15, 25, 28, **34, 41**, 62
16	1428	120a	25	1.338	0.377	0.507	0.79	**25, 31, 39, 41**	15, 25, **41**, 55, 62. 75
16	1429	120b	97	0.700	0.481	0.423	0.32	**15**, 25, 31, 37, 39, 41	28, 41, 62, 66, 75, 83
10	1431	114a	8	2.188	0.358	0.394	0.39	**41**	**15, 41, 60**
10	1432	114b	39	2.636	0.472	0.208	0.25	28, **37**, 39, **41**	15, 25, **41**, 60
22	1433	127	76	0.552	0.679	0.261	0.10	ND	ND

Continued from page 347

Dr. Kelly, when originally cultivating relapsing fever spirochetes, had to use different media for different species.[31] The syphilis spirochete has still not been cultivated in a cell free media.[32]

The CDC concluded that in the Missouri study of 22 patients tested there was no serologic evidence of a *B. burgdorferi* or related spirochetal infection.[2] All 22 were patients of Dr. Masters and the results are presented in Table 2. We disagreed with the CDC's negative conclusion and present here data that was excluded from the CDC manuscript. There were 45 patients in the CDC study and 40 of these patients had no less than 57 different positive Lyme serologies performed by 7 different laboratories.

Even though the CDC itself has researched and presented on the diagnostic utility of using faint or less intense Western blot bands for diagnosing Lyme disease,[28] as have other authors,[25] these were specifically excluded in this Missouri study. We know that atypical *B. burgdorferi* exist in Missouri[22] and that Zoller et al published that strain dependent differences of Western blot band intensities exist.[33] Additionally, there are numerous publications which have included faint bands. Engstrom et al. showed that most less intense bands should be counted.[25] Obviously, band intensity is not only a subjective interpretation by the laboratory, it can also be a function of technique and storage. The Missouri Western blots were performed by the CDC on stored sera that had gone through multiple freeze/thaw cycles. Also, in the Engstrom paper,[25] they could not match a number of their protein bands with those described by Dressler and thus there is published concern about the arbitrary use of such a rigid Western blot interpretation. We also have questions about the arbitrary decisions on IgM band specificity, as well as exclusion of OspA (31kDa) and OspB (34kDa) from the diagnostic criteria, which is contrary to all previously published literature.[24]

The gravamen of the CDC analysis is their assumption that their FLA ELISA is accurate in its negative results and their WCS ELISA is wrong in its positive results in detecting *B. burgdorferi* or a related spirochete. If one were biased toward a negative conclusion as we believe the CDC authors were, then the sensitivity of relatively comparable tests would take precedence. The CDC admits the ELISA test with Whole Cell Sonicate (WCS) is more sensitive.[2,32,35]

We believe that the differences should be examined and compared not only with the positive, but also with the negative control population. Of the 22 Missouri EM patients tested serologically by the CDC, 11 of the 22 had discordant results by having positive WCS ELISAs, using a three standard deviation cutoff for positive. The CDC did not mention that 38 non-Lyme Missouri controls were also tested by the WCS ELISA method and that only one of the 38 tested positive, as compared to 50% of the Missouri EM rash patients. The odds of this result occurring by chance exceed 25,000,000 to one. Missouri controls were not tested with the CDC FLA ELISA. Furthermore, if one takes the 21 Missouri patients who had both IgM and IgG Western blots and compares them to published studies in which faint bands were included, there are some interesting results. Using the same criteria, the Western blots on these 21 Missouri patients performed by the CDC were compared by us to the Ma study controls.[36] (Table 3) Of the major published *Borrelia* associated Western blot bands such as 20kDa, 31kDa, 34kDa, 39kDa, 66kDa, and 83kDa, the p values in the Missouri EM patients were significantly higher than the Ma study controls ($p < .002$) in every instance. Fawcet et al published a series of 200 non-Lyme controls in 1992 and of their Western blots, only one patient of 200 controls had four IgG bands.[26] As shown in Table 2, the vast majority of these Missouri EM patients had four or more IgG bands. These Missouri EM patients have Lyme serologies meaningfully different from published negative control populations.

Table 3. IgM & IgG Lyme Disease Western blot Bands

A comparison of 21 Missouri EM patients' Borrelia associated bands when tested by the CDC with published normal non-Lyme controls.

	Missouri EM			Ma Controls*			
kDa	#	21 pts.	%	#	320 pts.	%	p
20	2		9.5	2		0.6	< .001
31	3		14	7		2.2	< .002
34	6		28	8		2.5	< .001
39	7		33	4		1.3	< .001
41	21		100	138		43	< .001
66	11		52	42		13	< .001
83	8		38	4		1.3	< .001

* Ma et al. Serodiagnosis of Lyme borreliosis by Western Immunoblot: Reactivity of Various Significant Antibodies against *Borrelia burgdorferi*. *Journal of Clinical Microbiology*, February 1992, p. 370-6.

Analysis of the 11 CDC study patients with positive WCS ELISAs and negative or equivocal flagellar (FLA) ELISAs is also significant. The CDC had previously stated their WCS and FLA ELISAs were highly correlated with an $r > .90$.[34] We believe this needs to be explained. All 11 patients had a negative rapid plasma reagin (RPR), rheumatoid arthritis (RA), and antinuclear antibody (ANA) to help rule out cross-reactivity. All tested negative for antibodies to *Francisella tularensis*, *Rickettsia typhi*, *Rickettsia rickettsii*, arboviruses, and *Ehrlichia chafeensis*. One out of 10 patients tested positive to *Q fever (Coxiella burnetii)*. Two patients also tested positive to a CDC 1991 Lyme FLA ELISA. As mentioned, when compared with published controls patients[36] the p value for Western blot *Borrelia* associated bands (20kDa, 31kDa, 34kDa, 39kDa, and 83kDa) was .002 or less. Nine of these 11 patients had four or more bands on at least one Western blot performed by the CDC and eight of the eleven had five or more bands. The CDC itself has presented research that indicates that the presence of five IgG bands, even faint, have a high correlation with Lyme disease.[28] Eight of these 11 patients were also part of a national prospective study. Lyme serologies were done by Dr. R.J. Johnson of the University of Minnesota and 2 Standard Deviations (SD) was considered borderline and 3 SD positive. All eight (100%) of this subgroup had one or more Lyme ELISAs at least two SD from normal with many having strongly positive tests.

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Lyme and/or Lyme-like Disease in Missouri

Figure 1

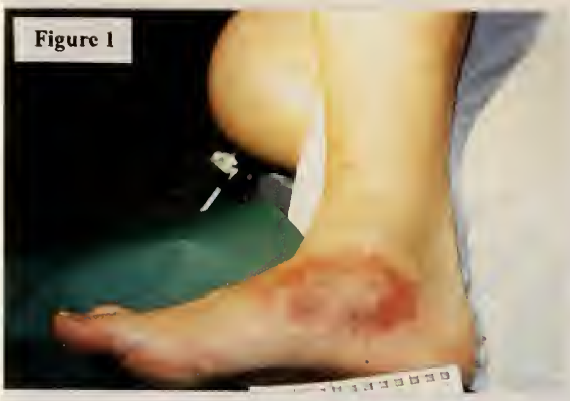


Figure 2

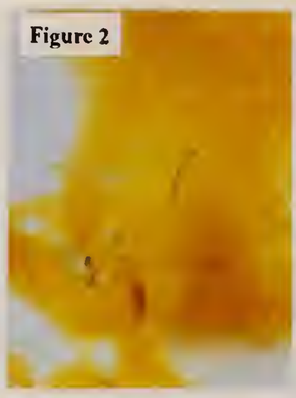


Figure 3

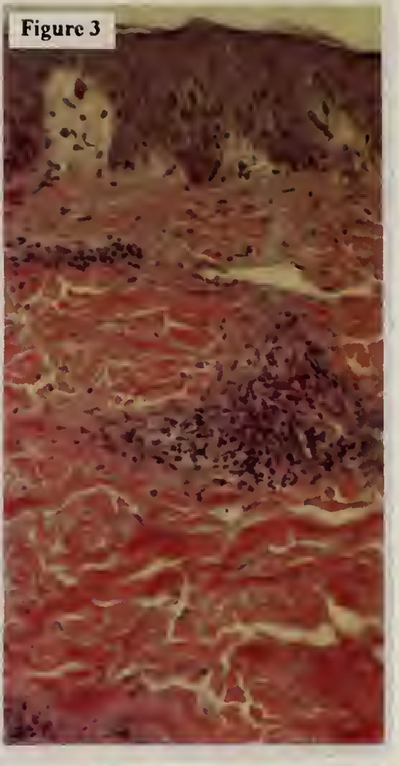
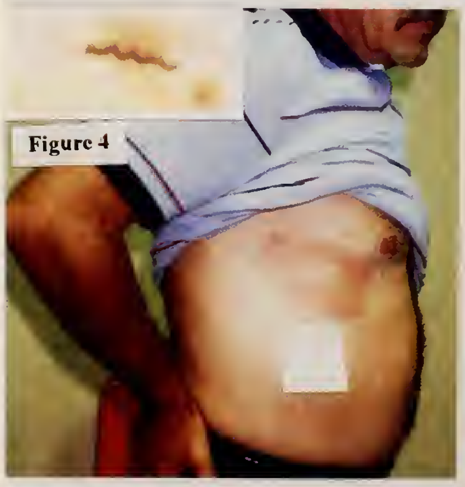


Figure 4

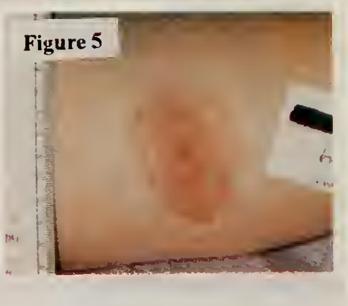


Left: J.S. Tick Bite,
Bollinger Co., MO.
Personally removed tick.
Rash started one week after bite.
Pictures taken 14 days after the tick bite.
Positive U. of CT Western blot.
Neg RPR; Neg RA; Neg ANA.
Positive pathology by three different pathologists:

1. Dr. P. Duray, Harvard
2. Dr. J. DeKoning, Netherlands
3. Dr. P. Cordes, Cape Girardeau, MO

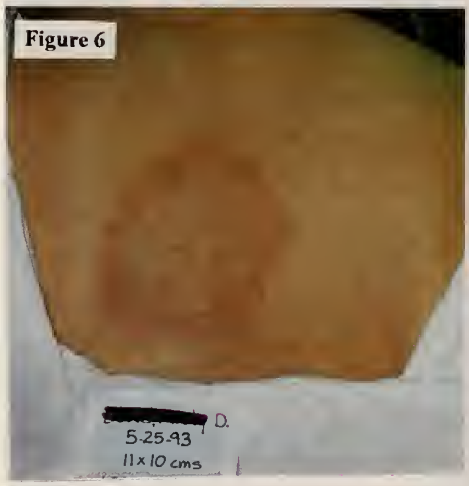
Non-pruritic painless expanding rash.
Tick bites before and after this have NOT resulted in rashes.

Figure 5



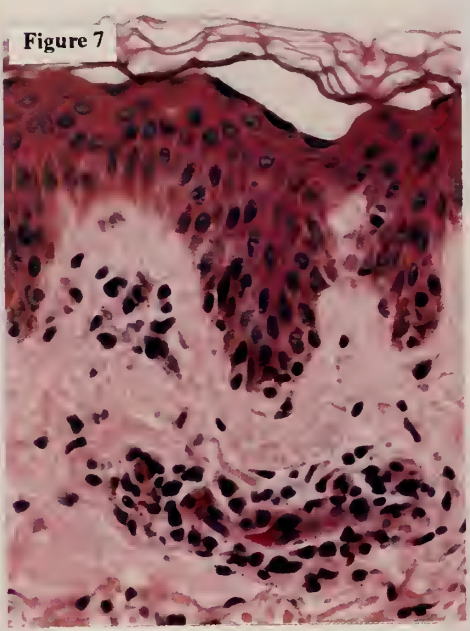
Above: Rash following tick bite in a 10-year old boy who had never traveled outside of Missouri. Western blot analysis initially showed no bands but 3 months later revealed IgG bands (29, 31, 41, and 66kDa). Results of rheumatoid factor and rapid plasma reagin tests were negative.

Figure 6



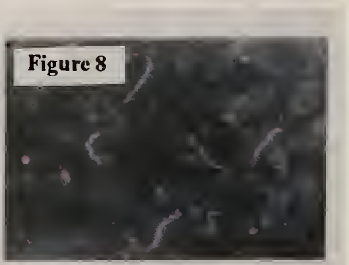
Above: M.D.
- Witnessed adult female lone star tick bite on back on 5/12/93
- Rash first noticed on 5/21/93 (9 days incubation time)
- Rash enlarged to 10x11 cm on 5/25/93
- Rash non-pruritic and painless
- Many previous tick bites, has never had one do this
- No tick exposure out of MO
- No allergies whatsoever
- Initial Lyme serologies all negative
- Neg RA; Neg RPR
- Lyme Western blot (Mardex) on 6/28/93: IgM 41kDa, IgG 39kDa, 41kDa, 58kDa, 60kDa
- Three *Borrelia burgdorferi* isolates from *Ixodes dentatus* obtained from her farm
- See histopathology on right

Figure 7



Biopsy of M.D. Rash
above: The epidermis and keratin layer are intact, with a lymphoplasmacellular perivascular infiltrate in the papillary dermis. These features characterize the histopathology of erythema migrans. H&E stain. Magnification x400.
Photo courtesy of P. Duray, Harvard.

Figure 8



Above: H5332 monoclonal antibody stain of an adult female lone star tick midgut.
Bollinger County, MO.
Photo provided by Dorothy Feir, Ph.D.
Saint Louis University.

Examples of Missouri Erythema Migrans in CDC Case Study

Figure 9

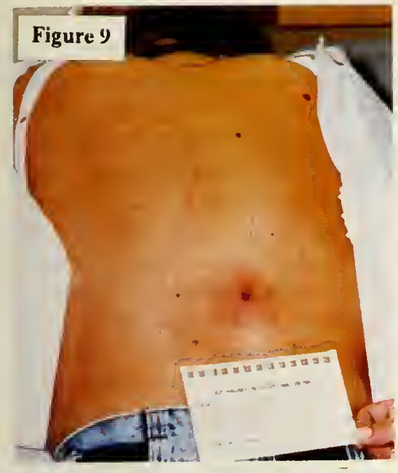


Figure 10

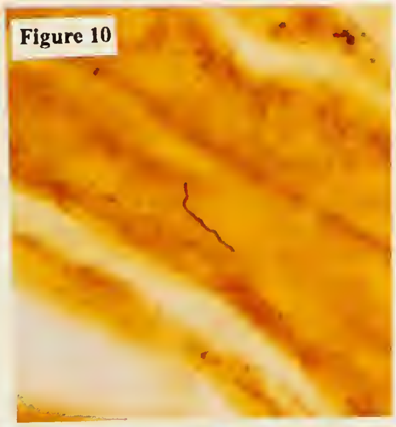


Figure 11

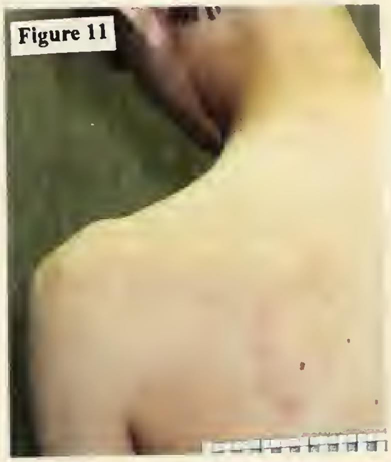


Figure 12

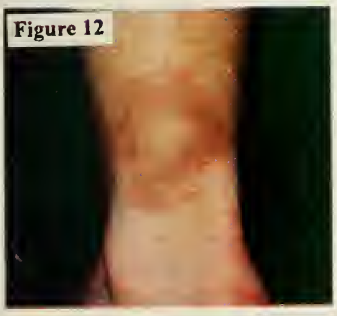
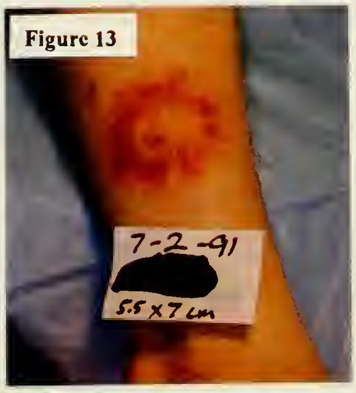


Figure 13



7-2-91
[redacted]
5.5 x 7 cm

Figure 14

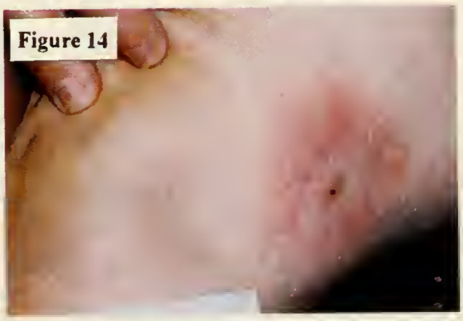


Figure 15

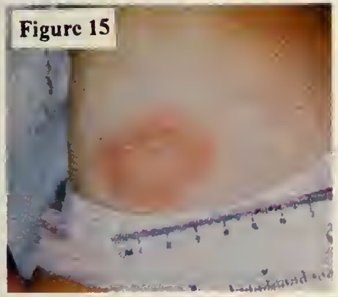


Figure 16

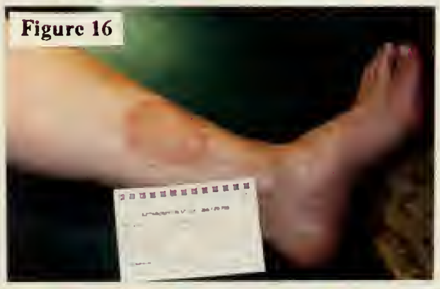


Figure 17

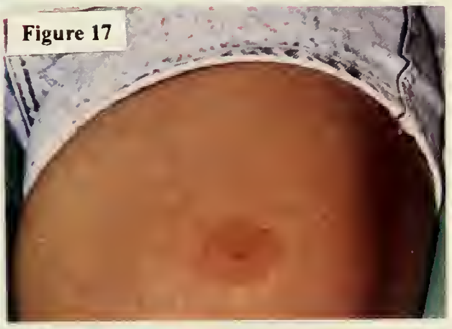


Figure 18

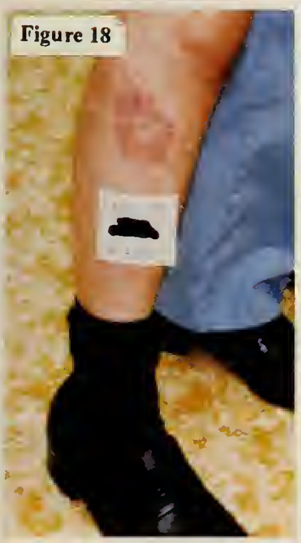


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Figure 19

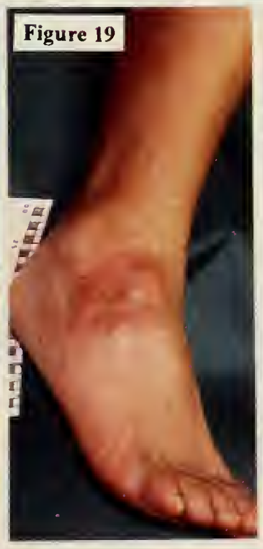

Figure 20

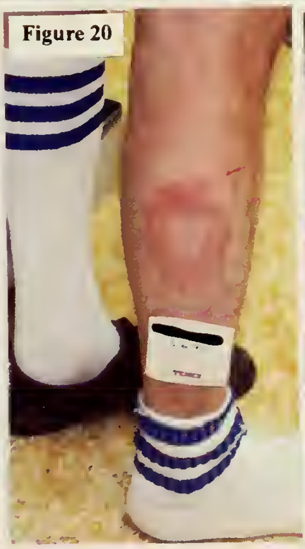

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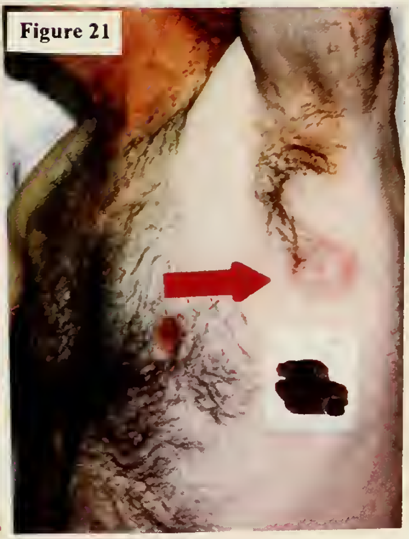
Figure 21



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Continued from page 349

Additionally, the CDC indicated the presence of an 83kDa, 39kDa, 21kDa, or 18kDa band was also highly specific for Lyme arthritis, even when faint.[28] As one can see from Table 2 many of these bands were present in the Missouri EM patients tested by the CDC. Engstrom et al showed that low intensity bands can have diagnostic utility and need not be excluded.[25] Bunikis et al showed that variable reactivity against different Lyme disease *Borrelia* spp. exists and concluded that differences in antigen compositions among *Borrelia* spp. may result in variable immune responses.[37] Knowing that different *Borrelia* spp. may exist and that atypical *B. burgdorferi* definitely exist in Missouri,[22] we believe that all of the available data should be evaluated before negative conclusions are made and published.

We know from Oliver and Kollar's work that *B. burgdorferi* are in Missouri *I. dentatus* ticks that preferentially feed on rabbits (but also occasionally on humans).[22] Bridge vectors should be researched. In Ryder et al's tick transmission study using geographically unmatched spirochetes in *Amblyomma americanum*, they showed a transstadial transmission rate of 1:60 (1.7%) that left open the question of whether lone star ticks could be involved in occasional human cases.[38] One cottontail rabbit in Southeast Missouri at the farm of an EM patient was examined and had *I. dentatus* ticks on it as well as over 1000 lone star larvae.[39] Even at a 1.7% rate, that single rabbit could theoretically be the source of infection for 17 lone star nymphs. Other researchers have seen spirochetes appearing similar to *Borrelia* that stained variably with H5332 monoclonal antibodies for *B. burgdorferi* in this area.[29,40-42] The CDC paper dismisses the positive IFA and PCR results of Feir et al[32] by stating that *B. burgdorferi* failed to be amplified using a second primer pair.[2] Three ticks were tested using the two primers and only one failed to amplify *B. burgdorferi* DNA with the second primer. The ability to amplify *B. burgdorferi* DNA using one set of primers while failing using a different set of primers is not uncommon and can possibly be attributed to strain variation. For example, Oliver et al (1994) found in one *B. burgdorferi* isolate from Missouri, that FLA DNA was amplified while OspA DNA was not using a second primer pair.[22] In the Feir et al study, PCR positivity was significantly associated with IFA positivity, and there were no PCR positive tests from IFA negative ticks from areas believed to be free of Lyme disease or from laboratory reared ticks.[32]

Figures on pages 350 and 351

Figure 1 Case Illustration. CDC Case #6, I.D.#111. MO EM rash, right foot, transient atrial fibrillation. **Figure 2** Modified Dieterle stain of EM biopsy in figure 1 showing a dermal spirochete. Photo courtesy of Dr. P. Duray, M.D., Harvard. **Figure 3** Histology of EM biopsy, case in figure 1 & 2, showing a dense lymphoplasmacellular infiltrate consistent with erythema migrans (Photo courtesy of P. Duray, M.D., Harvard). **Figure 4** Missouri EM, Bollinger County; (insert: Steiner-Steiner silver stain showing a dermal spirochete in his EM biopsy). **Figure 5** "Target" lesion characteristic of EM, Scott County. **Figure 6** MO EM after lone star tick bite. **Figure 7** Histology of EM in figure 6. Photo courtesy of P. Duray, M.D., Harvard. Also, on modified Dieterle stain of this biopsy, a dermal spirochete was visualized. **Figure 8** Lone star tick midgut smear showing spirochetes. **Figure 9** DS, CDC Case #21, ID#133 - positive CDC FLA ELISA in 1991, and positive IgM and IgG ELISA by Dr. R.J. Johnson. **Figure 10** Modified Dieterle stain showing a dermal spirochete in CDC case #21, figure 9. Photo courtesy of P. Duray, M.D., Harvard. **Figure 11** CDC Case #1, ID #116 (also seroconverted to Q fever) and seroconverted to Lyme with IgG ELISA by Dr. R.J. Johnson. **Figure 12** K.K. CDC study case. Enlarging rash noticed three weeks after tick bite while turkey hunting in Phelps County. PCR was positive for Lyme disease; **Figure 13** PH CDC Case#5, ID #105. **Figure 14** FN CDC Case #7, ID #132. **Figure 15** BW CDC Case #22, ID#127. **Figure 16** LH CDC Case #4, ID#145. **Figure 17** CP CDC Case #8. ID#140, CDC WCS ELISA seroconversion. **Figure 18** LA CDC Case #18, ID#119. **Figure 19** BT CDC Case #9, ID#113. **Figure 20** CC CDC Case #3, ID#121 (seroconverted on WCS ELISA). **Figure 21** LL CDC Case #2, ID#118 (Western blot seroconversion at North American Laboratories). Also developed a migratory oligoarticular arthritis. **Figures 5, 12, and 15** reprinted with permission of *Postgraduate Medicine.* **Figure 21** reprinted with permission of *Journal of Spirochetal and Tick-borne Diseases.*

Conclusion

In summary, we have presented evidence documenting Missouri patients that have clinical presentations that meet diagnostic and surveillance criteria for Lyme disease and that cannot be easily explained in the absence of a borreliosis. Previously, some believed that because Missouri did not have the *Ixodes dammini* deer tick, Lyme disease was not possible. We now know that *I. dammini* is not a valid separate tick species but is the same as *I. scapularis*, which is common in Missouri.[43] Missouri EM patients often have histological and serological results that are clearly abnormal and are consistent with a borreliosis.

We also believe that this illness can have marked sequelae. In the CDC study of 45 patients treated early,[2] there were still two cases of associated arthritis with visibly swollen joints and one carditis. Also, there were at least two cases of marked non-specific symptoms such as fatigue, impaired cognition, myalgias, etc. Three of these patients, including the patient with carditis at three weeks, one with arthritis at $2^1/2$ months, and another with arthritis at $4^1/2$ months were not reported by the CDC because of the study design.

We previously published on all 672 Missouri cases reported from 1989-1992 that met the CDC Lyme surveillance definition and compared the signs and symptoms to Lyme disease reported elsewhere. We concluded that Lyme disease reported in Missouri was similar in terms of signs and symptoms to Lyme disease reported nationally.[15] We agree with the CDC that physicians should maintain a high index of suspicion, not only for this syndrome, but for other Missouri tick borne illnesses such as rickettsiosis, tularemia, babesiosis, and ehrlichiosis. We also believe that there are insufficient available data to exclude clinical borreliosis, possibly caused by more than one variety of spirochete. At this time there is no alternative plausible diagnosis and we encourage physicians to comply with the Missouri law requiring reporting of Lyme disease.[44] Even though the exact etiology or etiologies of this clinical syndrome remain unproven, patients who meet the clinical criteria for Lyme disease should be reported. The Missouri Department of Health recognizes the etiological controversy and in order to further understand this illness and resolve the issue of Lyme vs. Lyme-like disease, data are needed and patients need to be evaluated. We have both identified and unidentified spirochetes in Missouri ticks that are biting our patients who then become ill with signs and symptoms that are extremely difficult to explain in the absence of a borreliosis - whether it is caused by *B. burgdorferi*, an atypical *B. burgdorferi*, or some other infectious agent or spirochete. Further research is needed.

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Acute Poisoning from Gamma Hydroxybutyrate (GHB)

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Gamma hydroxybutyrate (GHB) is an illicitly marketed substance promoted by body builders as a growth hormone releaser. Poisoning can produce seizures and coma. Acute poisonings from GHB have primarily been reported on the West coast and the Southeast. We report two cases from Kansas City where the patients presented in, or developed profound coma. Physicians should suspect GHB poisoning in patients who present with unexplained seizures and/or coma, particularly if they are body builders, health food fanatics or dieters.

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Gamma hydroxybutyrate (GHB) was initially synthesized in 1960[1] as a gamma-amino butyric acid analog capable of crossing the blood-brain barrier.[2,3] There was initial enthusiasm in Europe concerning its anesthetic properties, but interest diminished when animal and human studies documented a lack of analgesia and the risk of both petit and grand mal seizures.[4] The FDA has not approved GHB for use in this country, but it currently has investigational new drug status for the treatment of narcolepsy.[5]

Gamma hydroxybutyrate first entered the health-food and underground drug market in the spring of 1990.[6] It was available through mail-order firms under the brand names GHB, Gamma-OH, 4-Hydroxy Butyrate, Gamma Hydrate, Somatomax PM, Sodium Oxybutyrate, Gamma Hydroxybutyrate Sodium and Sodium Oxybate. It was also available in body building and fitness centers. It was advertised to stimulate growth-hormone release, promote body building and dieting. It has also been touted as a soporific and recently has gained popularity as a euphoriant.[4] The first adverse effects were reported shortly after the drug's release on the market, particularly on the West Coast.[6,7] These initial cases prompted the FDA to issue an advisory warning on February 8, 1990 stating that GHB use outside of FDA approved physician supervised protocols was unsafe, and illicit.[5] No cases have been described in Missouri. We report two cases, and review the common clinical features and treatment of GHB toxicity.

Case Report #1

A 24-year-old man was brought to the emergency department (ED) from a bar where he reportedly had become very violent and required several police officers to subdue him. The patient was handcuffed and lying prone on the sidewalk when the paramedics arrived. They obtained a history that the patient had been drinking and taking "GHB," which a friend reported to be a health food supplement used by body builders. There was also a report that the patient may have had a seizure while at the bar.

The patient was transported by paramedics, sandwiched between a backboard and scoop stretcher. He was well-developed and appeared to be a body builder. Upon arrival to the ED, the patient was agitated, screaming and spitting, and attempting to free himself from the restraints. There was no purposeful speech, and no history could be obtained from the patient. His initial vital signs were blood pressure 128/80 mmHg, pulse 64 per minute, respirations while agitated were 66 per minute, and temperature 95.4°F tympanic. There were a few abrasions and contusions noted about his face. Pupils were 2-3 mm bilaterally and sluggishly reactive to light. Tympanic membranes could not be visualized secondary to cerumen. The chest, cardiac, and abdominal exams were unremarkable. On neurological examination, the patient was noted to move all extremities spontaneously. There was no purposeful speech and eye opening was spontaneous (GCS 12).

The patient was placed in leather restraints, intravenous access was established, and 10 mg of intravenous diazepam was administered with good sedation. An 18 French foley catheter was inserted and urine obtained for a drugs of abuse screen. A serum ethanol level was also measured. Vital signs 1.5 hours after arrival were stable with a BP of 118/78 mmHg, pulse of 69 per minute, and respirations of 20 per minute. Pulse oximetry on room air was 94% to 95% and an accucheck was 75 mg/dl. The patient was placed on continuous cardiac monitoring and pulse oximetry. About 90 minutes after arrival, the patient was noted to have a marked decrease in his level of consciousness and became unresponsive to painful stimuli (GCS 3-4). Vital signs remained stable, with BP 121/51 mmHg, pulse 57 per minute (sinus bradycardia on monitor), respirations of 20 per minute with good chest excursion, and temperature of 97.2° F. Oxygen saturation at this time was 100% on room air. Pupils were still midpoint and reactive.

Three doses of IV naloxone 0.4 mg were administered followed by an additional 1.2 mg dose without any response. Three doses of flumazenil (0.3 mg, 0.3 mg and 0.4 mg IV) were also administered without response. The patient was noted to have a decreased gag reflex and elective intubation was performed following benzodiazepine sedation and succinylcholine paralyzation. A nasogastric tube was placed, and the patient's stomach lavaged. A cervical collar had been placed earlier in the patient's course, and a cross table lateral cervical spine film was negative. Because of the facial contusions and decreased loss of consciousness the patient was referred for CT scan of the head, which was negative.

Arterial blood gases revealed a paO_2 96 mmHg, pH 7.26, pCO_2 39 mmHg. Serum electrolytes were Na 137 mmol/L, K 5.3 mmol/L, Cl 96 mmol/L, and CO_2 16 mmol/L. Anion gap was 25 mmol/L, BUN 21 mg/dL, creatinine 1.5 mg/dL, and glucose 72 mg/dL. Calculated serum osmolality was 275 mmol/L, measured 334 mmol/L. Hemoglobin was 15.1 G/DL. The white blood cell count was 18,000 per mm^3 with a normal differential. A comprehensive urine drug screen revealed ephedrine, pseudoephedrine, and acetaminophen. No other drugs were present. Subsequent analytic evaluation of the urine revealed the presence of GHB. Serum ethanol was 183 mg/dl. Plasma salicylate and acetaminophen concentrations were zero, as were methanol and ethylene glycol concentrations.

Approximately four hours after arrival, the patient became more responsive. He began to respond appropriately and was extubated. The patient denied any underlying medical problems and admitted drinking ethanol and approximately two ounces of a clear liquid which he stated was GHB. Qualitative analysis of a sample of the clear liquid drank by the patient and brought in by his friend demonstrated the presence of GHB. He also admitted to taking ephedrine as part of his body building routine. He worked as a male dancer. He was discharged from the ED in stable condition 6 hours and 35 minutes after his presentation.

Case Report #2

A 27-year-old woman was brought to the ED by ambulance after she was found unresponsive in the rest room of a local bar. Friends of the patient stated that she had drank four beers and had ingested a substance called GHB. They also stated that other people in the bar initially said someone was having a seizure in the bathroom. The paramedics initiated an intravenous line and measured a blood glucose of 97 mg/dL.

Upon arrival to the ED the patient was comatose with a GCS of 3. Vital signs were blood pressure 106/59 mmHg, pulse 72 per minute, respiratory rate 12 per minute, and temperature 98°F. Patient's pupils were 3 mm bilaterally and sluggishly reactive to light.

Continued on page 356

Continued from page 355

There was an odor of alcoholic beverage on the patient's breath. Neurologic examination revealed that the patient was unresponsive to pain, flaccid, and had no gag reflex. The remainder of the examination was unremarkable.

The patient was given 2 mg naloxone IV followed by flumazenil 0.5 mg IV, without response. The patient was orally intubated, a nasogastric tube was placed, and 50 grams of activated charcoal administered.

Initial blood gasses just prior to intubation showed a pH 7.33, PO_2 27 mmHg, PCO_2 45 mmHg, and bicarbonate 23.8 mmol/L and was felt to have been a venous sample. Serum electrolytes showed a sodium of 143 mmol/L, potassium 2.6 mmol/L, chloride 97 mmol/L, bicarbonate 19 mmol/L, BUN 7 mg/dL, creatinine 1.2 mg/dL, glucose 108 mg/dL, serum ethanol level was 126 mg/dL. Anion gap was 27 mmol/L. CBC showed a WBC of 10,400 per mm^3, hemoglobin 12.3 G/DL, hematocrit 37%, and platelet count was adequate. The comprehensive urine drug screen was positive for ethanol, ephedrine, and phenylpropanolamine.

Approximately 45 minutes after her arrival, the patient awoke and became very agitated. The patient was subsequently extubated and observed for a total ED stay of 4 hours and 45 minutes. Upon awakening, she admitted taking a vitamin bottle capful of liquid GHB obtained from a male body building friend. She stated she then began to feel dizzy and lightheaded and couldn't remember anything else. The patient stated she had taken GHB in a powdered form without adverse effects before this. The patient was discharged from the ED in stable condition.

Discussion

We describe the first reported cases of acute GHB toxicity in Missouri. In both cases there was a bodybuilding connection, possible seizure and the development of profound coma without respiratory depression. The diagnosis was supported by the patient's history of ingestion, the patient's friends, and in the first case by analytical evaluation of urine and the liquid ingested. Comprehensive urine drug testing in both cases did not identify other CNS depressants. Supportive treatment was provided, and their symptoms resolved within 5-6 hours of ED admission.

The mechanism by which GHB produces its clinical effects remain unknown despite extensive investigation.[9,10,11] Gamma hydroxybutyrate is a metabolite of gamma-amino butyric acid (GABA), a known central nervous system (CNS) inhibitor. It is believed to be a GABA agonist, is known to stimulate the release of dopamine within the brain,[12,13] and may potentiate endogenous opioids.[14]

The clinical effects primarily involve the central nervous system, and are dose related.[5] Under controlled conditions, 10 mg/kg doses result in amnesia and hypotonia, and 20-30 mg/kg doses result in drowsiness, somnolence, dizziness, and euphoria.[9] Sleep paralysis, sleep walking, agitation, restlessness, delusions, hallucinations, enuresis, and myoclonic movements have all been reported.[15,16] Unconsciousness generally results with doses of 50 mg/kg and unarousable coma with doses of 60 mg/kg or greater.[10] With coma the pupils are usually miotic and unreactive.[17,18] Absence and grand mal seizures have both been reported.[7,19,20]

Excess salivation[16] has been reported and vomiting is seen in greater than 50% of patients emerging from intravenous GHB anesthesia.[21,22] It was also reported in 3 of 10 cases after oral ingestion.[7] Sinus bradycardia[10,23] is common as is a decreased respiratory rate.[20,21] A compensatory increase in tidal volume usually results in the minute ventilation remaining normal. Respiratory depression and apnea have been reported with GHB, but are less common than with the narcotic analgesics. While GHB is reported to have less effect upon gag reflex than other CNS depressants, both of our patients had decreased or absent gag reflexes, and were intubated for airway protection. A mild to moderate metabolic acidosis also occasionally occurs, as it did in these patients.[10]

Gamma hydroxybutyrate is typically distributed in a powder or granular form,[5] and dissolved in water prior to ingestion. The substance is rapidly absorbed from the gastrointestinal tract and the onset of action is usually within 15 minutes.[5,10] The symptoms and signs of acute ingestion usually resolve within eight hours.[5,24] Long term sequelae are uncommon but some patients have complained of dizziness for as long as two weeks post ingestion.[4,7] To date, there have been no reported deaths[5] and no evidence of physiologic addiction exists.[7] Gamma hydroxybutyrate is known to act synergistically with alcohol to produce CNS and respiratory depression.[25]

Treatment of GHB intoxication is symptomatic and supportive.[26] Gastric decontamination via lavage is indicated if the patient is not actively seizing. Syrup of ipecac is probably contraindicated since CNS depression can occur quickly and early. Activated charcoal and a cathartic are also indicated. Anecdotally, naloxone has not proven effective.[5,6] In our patients neither naloxone or flumazenil produced any change in toxicity. Routine drug screens are also not helpful since GHB will not be detected. The history of exposure was easily obtained from both patients after recovery, and confirmed by other individuals present at the time of ingestion. In both cases body builders were involved.

Summary

Gamma hydroxybutyrate is a potentially dangerous drug, associated with coma and seizure like activity. The greatest potential for abuse is among the body-building population for its claimed anabolic effects. Physicians should be alerted to the clinical effects of GHB since abuse may become more widespread as reports of its euphoric effects increase experimentation with this drug.

Since this manuscript was submitted for publication there have been at least 9 other patients with GHB ingestion who have presented to Kansas City area emergency departments. This suggests that an on-going source of this illegal substance continues to be available in the Kansas City area.

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Pseudoaneurysm of the Left Ventricle Presenting as Congestive Heart Failure without Ischemic Chest Pain or Q Wave Infarct

Jay I. Lipoff, MD, FACC

A 65-year-old man with congestive heart failure, no history of Q wave infarct and non-diagnostic ECG was found to have a large left ventricular pseudoaneurysm.

The Author

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Rupture of the heart is an infrequent complication of transmural myocardial infarction which is usually rapidly catastrophic. However, rarely the rupture is contained by the pericardium without tamponade producing a communicating hematoma or pseudoaneurysm. I report an unusual presentation of left ventricular pseudoaneurysm.

Case Report

A 65-year-old man was hospitalized in January 1993 because of dyspnea, orthopnea, paroxysmal nocturnal dyspnea, and pedal edema. These symptoms began in early December 1992. He denied any chest pain. Upon physical examination, internal jugular venous pulsations were noted 5 cm above the angle of Louis and hepatojugular reflux was present. The carotid pulses were 2+/4+ bilaterally with normal upstroke and no bruit. The lungs demonstrated vesicular breath sounds, equal bilaterally, with fine bibasilar rales but no wheezes or rhonchi.

The cardiac apex was not palpable and there was no lift or thrill. The first and second heart sounds were normal. An S3 gallop was present. There was no S4 gallop, murmur, rub or click. The liver and spleen were not palpable. There was 1+/4+ bipedal edema. A clinical diagnosis of congestive heart failure was made.

Risk factors for coronary disease included systemic hypertension and cigarette smoking, both for many years. He denied a family history of coronary disease. He never had diabetes mellitus or hypercholesterolemia. His ECG showed normal sinus rhythm, low frontal lead voltage, and non-specific T wave abnormality.

He had previously been hospitalized in August 1992 for non-specific chest pain following a fracture of the left humerus due to Paget's disease. At that time, his ECGs were non diagnostic; his CK rose slightly with positive MB; technetium 99m pyrophosphate scan was negative; and 2D echocardiogram showed normal regional and global left ventricular systolic function. He refused invasive evaluation and was discharged with a diagnosis of unlocalized non-Q wave myocardial infarction.

Following re-hospitalization in January 1993, chest radiography demonstrated severe cardiomegaly; left ventricular enlargement; focal bulging of the left posterolateral heart border; cephalization of the pulmonary venous pattern; small bilateral pleural effusions; Kerley B lines; and interstitial pulmonary edema. This was followed by an echo Doppler study which disclosed a large left ventricular pseudoaneurysm with definite evidence of rupture of the inferoposterolateral surface of the left ventricle (Fig 1). The defect had an echo diameter of approximately 28 mm. Bidirectional blood flow was demonstrated by spectral Doppler between the left ventricle and the pseudoaneurysm. There was no evidence of aortic or mitral valve disease by echocardiogram or Doppler evaluation.

Left ventriculography in right anterior oblique and left anterior oblique projections confirmed rupture of the left ventricle on the inferoposterolateral surface (Fig 2). Coronary angiography demonstrated total left circumflex occlusion immediately distal to the origin of the first obtuse marginal branch. The left main and anterior descending arteries were normal. The right coronary artery was anatomically dominant with multiple 40-70% lesions including 70% lesion at the bifurcation into posterior descending and posterolateral branches.

At surgery, there were fibrinous adhesions filling the pericardial sac with no blood pigment. The pseudoaneurysm was easily broken through with a finger and, in general, could be mobilized by blunt dissection. The defect in the ventricle itself measured approximately 2 x 3 cm correlating well with 2D echo measurement. It had a fibrous rim. Looking inside the ventricle, the defect was seen to be exactly between the origins of both papillary muscles without involving them. The papillary muscles appeared normal without scar. The defect was closed with a Teflon patch and a

Continued on page 360

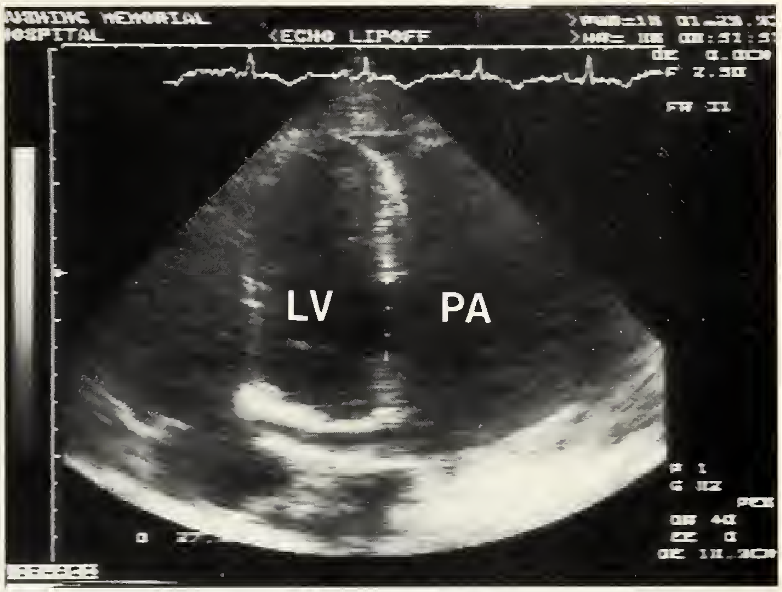

Figure 1. 2D echocardiogram demonstrating defect in the posterolateral wall of the left ventricle (LV) with pseudoaneurysm (PA).

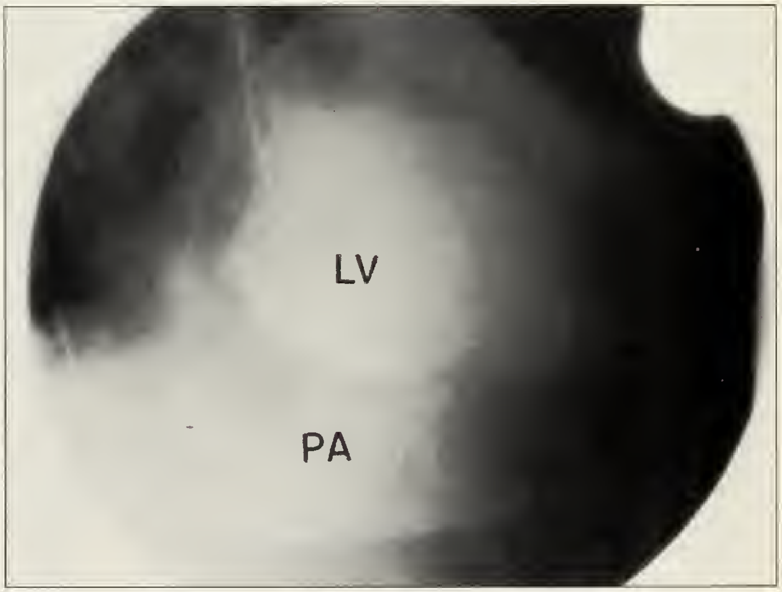

Figure 2. Right anterior oblique left ventriculogram: demonstrating the left ventricle (LV) with pseudoaneurysm (PA).

Continued from page 359

saphenous vein bypass was constructed to the distal right posterolateral coronary artery. The posterior descending coronary artery was deemed too small for bypass grafting. Postoperatively, he was anticoagulated with warfarin, digitalized, and treated with lisinopril with a good clinical result. Warfarin was discontinued after three months and aspirin begun.

Discussion

Pseudoaneurysm of the left ventricle is an unusual complication of myocardial infarction. While the incidence of pseudoaneurysm following myocardial infarction has not been reported, the frequency after mitral valve replacement is not trivial: 0.8%.[1] Diagnosis is urgent and surgical intervention appropriate because of the high risk of rupture.[2,3] Patients range from the asymptomatic state to acute or chronic heart failure.[3] Elapsed time from antecedent infarction varies greatly: from a few days up to twenty years.[4] 2D and Doppler echocardiography are indispensable in the rapid diagnosis of this problem. Both spectral and especially color flow Doppler facilitate detailed non-invasive evaluation and mapping of blood flow between the pseudoaneurysm and the left ventricular cavity.[2,5,6] The timing and direction of this flow can be correlated to other events in the cardiac cycle such as atrial systole, transmitral and aortic flows.[7,8] Coincident aortic and/or mitral valve disease can be detected and quantitated prior to invasive evaluation and/or surgical intervention.

This was a noteworthy case. The pseudoaneurysm was quite large. Moreover, pseudoaneurysm formation requires an antecedent transmural myocardial infarction; however, in this case the infarct was non-Q wave and nearly escaped detection altogether. Although unusual, this is possible since only 67% of transmural myocardial infarctions produce pathologic Q waves on the electrocardiogram.[9]

The best means of preventing pseudoaneurysm is prevention of myocardial infarction by aggressive treatment of modifiable risk factors. At the onset of acute myocardial infarction, the best preventative treatment for pseudoaneurysm is early reperfusion [especially TIMI grade 3 (normal) flow to minimize infarct size] and the early use of a beta blocker.[10,11]

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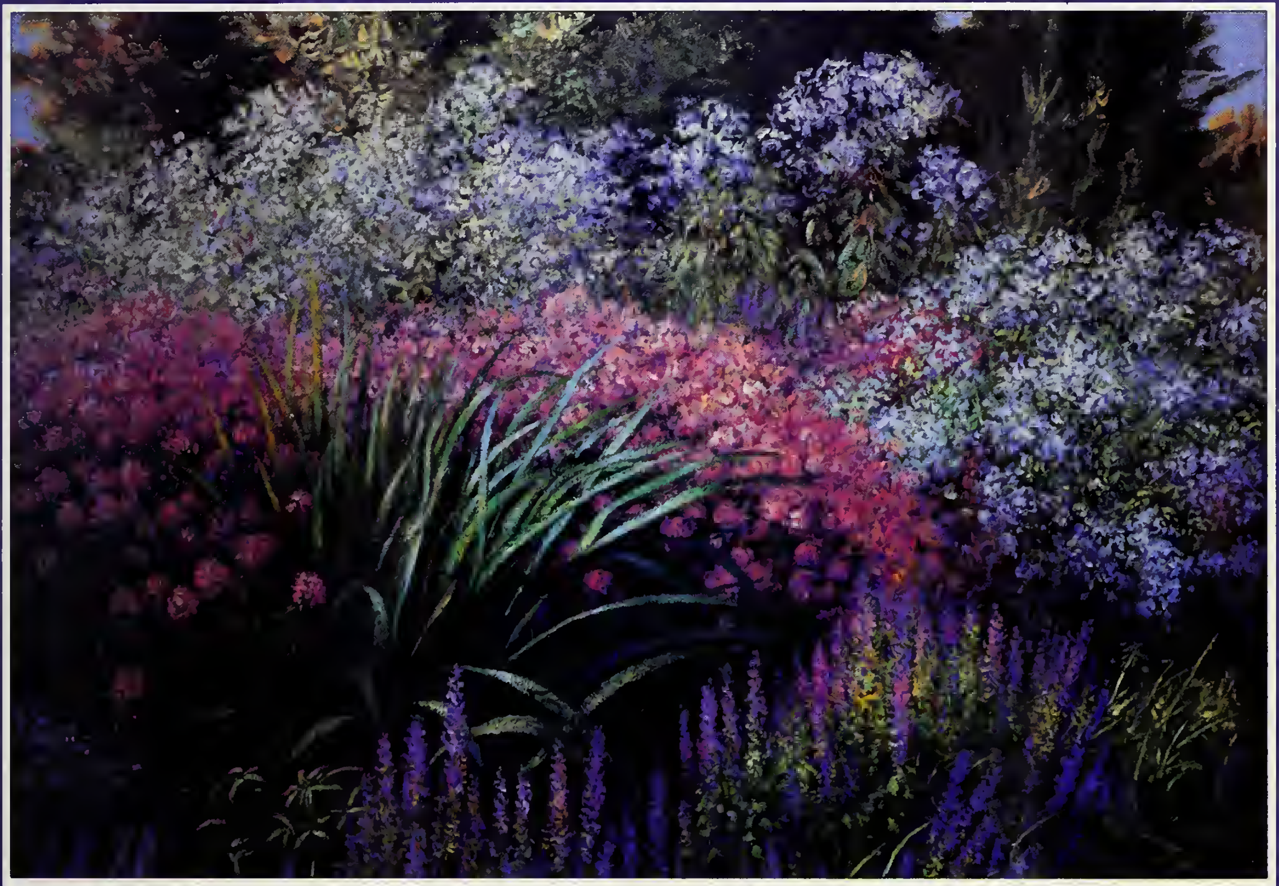

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VOLUME 92, NUMBER 8

MSMA Officers 373

MSMA Councilors 374

MSMA Vice Councilors 375

AMA Delegates & Alternate Delegates 376

Insurance Options for MSMA Members 378

MSMA Committee & Commissions 380

MSMA Policies 383

MSMA Constitution & Bylaws 388

Component Medical Societies 397

MMPAC Contributors 398

Medical Specialty Organizations 400

District & Component Society Boundaries Map 406

Component Society Codes 408

Alphabetical Roster of Members 409

Practice Specialty Codes 446

Membership Roster by Primary Specialties 447

Roster of Members by Component Society 477

MSMA Only 477
Andrew 478
Audrain 478
Barton 479
Boone 479
Buchanan 483
B-W-R-C 485
Callaway 486
Cape Girardeau 486
C-M-M-R 488
Clay-Platte 488
Clinton 490
Cole 490
D-H-P-D 491
Dunklin 492
F-G-W 492
Grand River 492
Greene 493
Henry 499
Jasper 499
Jefferson 501
Johnson 501
Laclede 502
Lafayette-Ray 502
Lake of the Ozarks 502
Metro Med of K.C. 502
Mid-Missouri 516
Mineral Area 516
Montgomery 517
North Central 517
Northeast 517
Northwest 517
Ozarks 518
Pemiscot 518
Perry-Ste Genevieve 518
Pettis 518
St. Charles-Lincoln 519
St. Louis Metropolitan 520
Saline 543
SEMO 543
South Central 544
Tri-Lakes 544
Webster 544
West Central 545
Residents Section 545
Students Section 548

Classified Listings 552

On the Cover: "Wildflower Garden: Shaw Arboretum" - 32" -26" acrylic on canvas, by St. Louis artist John Odell. This painting will be part of a one-man show at the Missouri Botanical Garden in St. Louis, from October 18 to November 19, entitled "Four Seasons at the Arboretum."

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Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $60.00. Annual subscription for members is included in the annual membership dues. The annual August Directory is $40.00.

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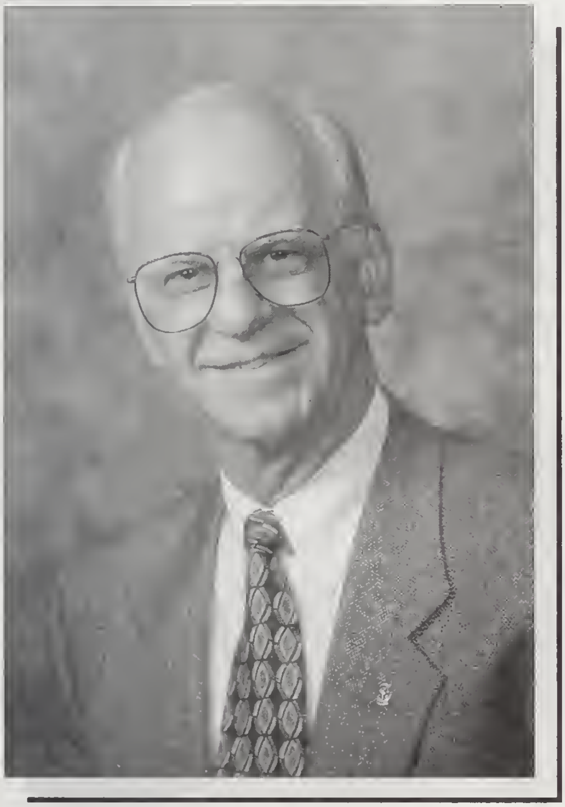

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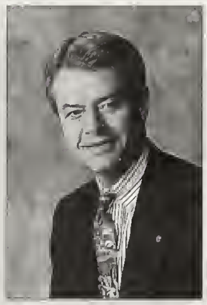
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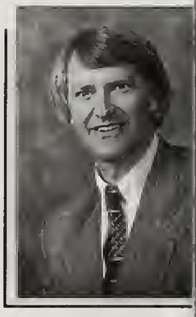
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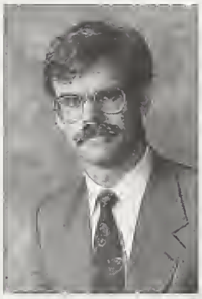

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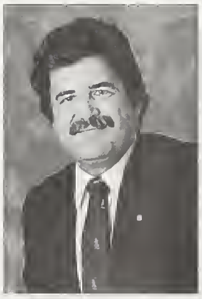

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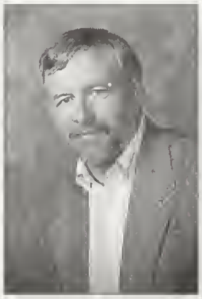

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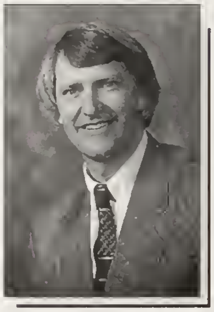
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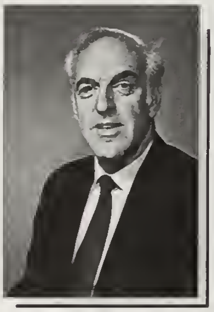
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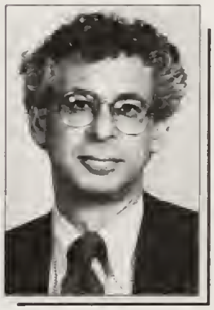
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Address______________________________
City____________________State______Zip_________
Phone (______)______________________________
Date of Birth ____________________________

MSMA Policies

Alcohol - Abuse

The MSMA continues to support the work of community-based organizations such as AA, Al-Anon, Narcotics Anonymous, and others, and it reaffirms its support of professional and public education efforts designed to alert people to the dangers of alcohol and drug abuse. In addition, the MSMA supports the Physicians' Health Program and similar programs aimed at helping the victims of alcohol and drug abuse to recover successfully. (1987)

Alcohol - Driving

The MSMA encourages a zero tolerance law (defined as blood alcohol of 0.02% or greater) for drivers under 21 years of age. Violation of this law would result in suspension or revocation of driver's license. (1995)

Board of Healing Arts

The MSMA opposes any legislation that would dilute the licensing power of the State Board of Registration for the Healing Arts to license physicians of good ethical and moral character. (1975)

The MSMA encourages and supports legislation directed toward developing a system of checks and balances with regard to the Board of Registration for the Healing Arts' ability to both investigate and assess (tax) physicians. (1992)

Reporting of Cancer

The MSMA supports efforts to require hospitals to report to the state all malignant neoplasms, with the exception of non-melanomatous cutaneous malignancies. These statistical data are necessary to determine relationships between cancer control efforts and the incidence of cancer in the state. (1982)

Collaborative Practice Guidelines

With the exception of extraordinary circumstances, the MSMA declares that a physician should not engage in a collaborative practice arrangement with more than two full-time equivalent advanced practice nurses and/or physician assistants at one time. Also a system of registration of all collaborative practice agreements, within sixty days of their execution, should be established. (1995)

Chelation Therapy

The MSMA supports the use of IV chelation therapy in FDA-approved applications only. (1990)

Chiropractic

The MSMA is unaware of any scientific evidence that proves that spinal manipulation and adjustment are appropriate treatments for such health conditions as hypertension, heart disease, stroke, cancer, diabetes, and infection. (1981)

Definition of Death

A person shall be considered dead if, in the announced opinion of a licensed physician, based on ordinary standards of medical practice, he or she has experienced an irreversible cessation of spontaneous respiratory and circulatory functions. In the event that artificial means of support preclude a determination that these functions have ceased, a person shall be considered dead if, in the announced opinion of a licensed physician, based on ordinary standards of medical practice, he or she has experienced a total and irreversible cessation of spontaneous brain functions, including the brain stem. Death shall have occurred at the time when the relevant functions ceased. (1987)

Ordering of Diagnostic Tests

With the exception of not-for-profit health fairs and mammography screening, the MSMA is opposed to, and considers unethical, the practice of ordering laboratory studies and other diagnostic tests without evidence or indication obtained by a physician in a history and physical examination. (1989; amended 1991)

Dioxin

The MSMA supports continuing monitoring of dioxin research, recognizing that to date no serious human disease has been conclusively linked to exposure to the chemical. The findings of the AMA Council on Scientific Affairs Panel on Toxic Substances are supported by the MSMA. (1985)

Disabled

The MSMA is involved in seeking positive ways to encourage training and rehabilitation for disabled persons. The MSMA works with existing organizations to remove physical and emotional barriers that prevent people from working. (1982)

Drugs, Generic Prescribing

The MSMA opposes any interference into the practice of medicine by any governmental agency, third party payer, or commercial dispensing organization through mandated generic or therapeutic substitutions for physician prescriptions. (1992)

Drugs, Physician Dispensing

The MSMA supports the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with the AMA's published ethical guidelines. (1988)

Continued on page 384

Continued from page 387

(Drugs, Physician Dispensing)

The MSMA believes that dispensing of drugs and medical devices is part of the practice of medicine and that physicians always have the right to dispense needed drugs and devices. (1991)

Drugs, Therapeutic Substitution

The MSMA opposes the therapeutic substitution of prescribed medications. (1990)

Drunken Driving

The MSMA supports the development of local task forces to study and remedy the problem of drunken driving. These task forces should include physicians, prosecutors, law enforcement officers, and legislators. (1990)

Education, Loans for Medical Students

The MSMA supports continued federal and state subsidized, low-interest loan programs for medical students, with properly enforced repayment. (1982)

Education, School Health

Factual, academically founded courses should be developed and implemented by the Missouri Department of Education to teach human physiology and pathophysiology at the elementary and secondary levels of the school system. (1974)

County medical societies are urged to work with local school districts to assist in providing comprehensive health education programs, and the state colleges of Missouri are urged to prepare qualified health instructors trained to integrate health concepts into all the courses they teach. (1972)

Emergency Care

The MSMA supports the American College of Emergency Physicians and the American College of Surgeons standards for direct medical control of pre-hospital (emergency) care by qualified physicians. (1986)

ERISA

The MSMA supports federal legislation that would modify ERISA to hold self-insured, employee health benefits plans accountable for negligent utilization review decisions and ensure meaningful remedies and fair compensation to patients who are injured as a result of such a decision.

MSMA is in support of federal legislation that is developed to modify ERISA from retroactively changing health care benefits, including monetary policy limitations, after an employee has already contracted an illness or condition.

MSMA advocates that these ERISA modifications be included in federal health system reform. (1994)

Ethics, Education in Medical School

The MSMA supports the teaching of medical ethics to medical students and resident physicians, including information on the workings of professional disciplinary agencies. (1987)

Expert Witness Qualifications

The MSMA supports legislation to formalize required qualifications for physicians wishing to testify as expert witnesses. (1992)

Fee-For-Service Medicine

The MSMA believes that the traditional American fee-for-service medical system should be given equal consideration and equal treatment under the law as other systems of health care provision. (1990)

Fee Splitting

The MSMA reaffirms its support of the AMA Judicial Council's position that the acceptance of financial consideration in exchange for patient referrals, or fee splitting, is unethical and improper. (1985)

Fireworks

The MSMA supports legislation to prohibit the sale of Class C fireworks in the state of Missouri. (1991)

Fluoridation

The MSMA, realizing the medical importance of naturally occurring fluoride taken in proper concentration into the human body, recommends the addition of fluoride to all drinking water systems in Missouri in the concentration of one part per million. (1972)

Governmental Intrusion into Practice of Medicine

The MSMA opposes any further governmental intrusion into the practice of medicine, particularly in the form of rules and regulations from federal agencies. (1992)

Health Care Costs

The MSMA encourages individual physicians to do their part in helping moderate increases in health care costs by avoiding overutilization and by using restraint when considering fee increases, in order to keep them in line with general cost of practice increases. (1989)

Helmets, Use of

The MSMA urges all motorcyclists to wear protective head gear (helmets) to prevent death and disability. (1977)

The MSMA supports legislation requiring the use of bicycle safety helmets as an effective method of reducing death and injury. (1991)

Hospital Medical Staffs, Autonomy

Since the hospital medical staff is a largely autonomous entity within the hospital, the MSMA supports the securing of separate legal counsel by medical staff members when considering matters of rules, regulations and bylaws. (1985)

Hospital Medical Staffs, Membership

The hospital medical staff cannot be forced to accept for full voting membership any member of the allied health professions. This is in keeping with the MSMA's support of existing JCAHO and AMA guidelines that state no hospital governing board can unilaterally amend the bylaws of a self-governing medical staff, nor can it unreasonably withhold approval of the bylaws. (1987)

The MSMA supports existing state statutes and regulations that delineate requirements for hospital licensure and individual eligibility for medical staff privileges. (1989)

Human Rights

The MSMA continues to support the dignity of the individual, the importance of human rights and the sanctity of human life, and continues to oppose any discrimination based on an individual's ethnic origin, religious or political beliefs, or any such reprehensible policies. (1986)

Immunization

The MSMA supports American Academy of Pediatrics guidelines for immunization of children. (1987)

Indigent Care

The MSMA urges all physicians to share in the care of indigent patients. (1988)

Insurance, Charge for Extra Claim Forms

Physicians should feel free to charge for the additional service of filing more than one insurance claims form for an individual patient, especially if different claim forms are required rather than a photocopy of the original form. (1973)

Insurance, Insurance Company Communications

The MSMA urges health insurance companies to cease to communicate abusive and inappropriate language to patients regarding their physicians' fee structures and services. (1985)

Insurance, Maternity Coverage

The MSMA supports inclusion in all insurance policies for those in childbearing years of a clause providing complete maternity coverage.

In order to provide continuity of coverage, the following eligibility period should be written into all insurance policies concerning benefits for obstetric care: "A pregnancy which begins while the insurance is in force should be covered until the termination of the puerperium and until the newborn infant is discharged from the hospital to home care." (1974)

Insurance, New Waiting Periods

The MSMA believes employees should not have to undergo a new waiting period for coverage of preexisting illness whenever their employer changes insurance companies, particularly when the change is being made in the interest of controlling health care coverage costs. (1985)

Insurance, Psychiatric Illnesses

The MSMA recommends that the state require all health and accident insurance policies sold in Missouri to provide coverage for psychiatric illnesses equivalent to benefits for other medical and physical illnesses. (1978); Reaffirmed (1985)

Insurance, Right to Know

The MSMA encourages all third party payors to provide an easily understood explanation of their benefits and coverage to their policyholders. (1986)

International Medical Graduates

The MSMA Council and Committees are encouraged to consult with International Medical Graduate groups when subjects of interest come up. All physicians, international medical graduates included, are encouraged to participate in their component medical societies, the MSMA, and the AMA. (1982)

Laboratory, Collecting Fee

The MSMA supports payment under Medicaid to the physician for his or her service in collecting a specimen for tests performed in an outside laboratory. (1977)

Licensing, Federal

The MSMA opposes any moves to require federal licensure of health manpower. (1976)

Malpractice, Countersuits

Any Missouri physician found not to be negligent in a malpractice suit shall have the assistance of the MSMA in determining if there exists a reasonable basis for the physician to commence an action for malicious prosecution arising out of such case. (1976)

Continued on page 386

Continued from page 385

Mandated Second Opinion

The MSMA suggests that the physician who renders a mandated second opinion for a proposed surgical procedure not accept that person as a patient for the proposed surgical procedure. (1987)

Mandatory Assignment

The MSMA is opposed to mandatory assignment under Medicare. (1984)

The MSMA is opposed to the withholding of medical licensure based on the physician's nonacceptance of Medicare assignment. (1987)

Medical Examiner System

The establishment of a county medical examiner system as a replacement for the county coroner system is strongly recommended. (1971)

Medicare-Mandated Restrictions

The MSMA opposes Medicare-mandated restrictions on any laboratory tests, referrals, medical examinations or any financial arrangements that might be agreed upon between physician and patient. (1988)

Medicare - DRGs for Physician Reimbursement

The MSMA opposes the use of Diagnosis-Related Groups as a system of reimbursing physicians under the Medicare program. (1992)

Medicare - Reimbursement to Starting Physicians

The MSMA believes starting physicians should not be reimbursed at a lower rate than other physicians. All physicians should be reimbursed equally for equal services. (1992)

Medicare - Single Statewide Payment Factor

The MSMA supports the adoption by the Health Care Financing Administration of a single, statewide geographic Medicare physician payment adjustment factor for the state of Missouri. (1992)

Medicare - Third Party Reimbursement, Physicians

The MSMA supports equal reimbursement for equal professional services provided by a physician, regardless of his or her geographic location. (1982); Reaffirmed (1987)

Medicare - Reimbursement, Hospital DRGs

The MSMA believes it is unfair for Medicare to grant a lower payment to rural hospitals, as compared to urban hospitals, for patient care under the same DRG. (1988); Reaffirmed (1989)

Mentally Incompetent Patients, Hospitalization

The MSMA urges extension of the time limit from 7 to 21 days before the family of a mentally incompetent patient must petition the court for continuation of a hospitalization. (1985)

MSMF Loans

The Missouri State Medical Foundation requires membership in the Missouri State Medical Association for those medical students eligible for membership and receiving assistance from the Foundation. (1980)

Nurse Practitioners

The MSMA supports the doctrine that physicians should retain control of medical care and will challenge any person who is practicing medicine without a license, in the courts of law if necessary. (1978)

Patient Accountability

The MSMA encourages government, at all levels and whenever possible, to incorporate incentives for patients to behave in ways not detrimental to their health. (1992)

Peer Review Organization Data

The MSMA asks that data from the Missouri Patient Care Review Foundation concerning decision-making criteria for Medicare admission be made available to Missouri physicians as a way to ensure that denials are not having a negative impact on the quality of medical care for these patients. (1985)

The MSMA supports the current AMA program of data collection on the costs of PRO implementation and the inequities in the PRO system. (1987)

Peer Review Organization Review

The MSMA reaffirms its belief that physicians' work should be reviewed only by other physicians. In addition, the MSMA supports the modification of PRO standards of reviewer anonymity, believing that the reviewers' work should also be subject to review. (1990)

PHO Open Enrollment

The MSMA supports open enrollment of qualified physicians in their hospitals' PHOs in order to preserve physicians' right to participate in any health care plan operating in Missouri. (1994)

Physician as Patient Advocate

The MSMA affirms its support of the physician in the role of patient advocate in the consumption of health care services, particularly when this role conflicts with the economic goals of the physician's employing third party. (1987)

Physician Assistants

The MSMA opposes state licensure or certification of additional health care personnel because there is no reason to accept a second class or second level of medicine. (1979)

Physician, Right to Choose

The MSMA supports the right of each physician to determine for him or herself whom he or she will or will not accept as patients and to exercise his or her choice by the terms of contractual agreements with other physicians, medical groups, third party payers, governmental agencies, hospitals or other institutions. (1981; updated 1992)

Physician, Right to Hospital Privileges

The MSMA is opposed to the granting of hospital privileges to a physician based on that physician's profitability to the hospital. (1988)

Political Process

The Association encourages physicians to become Key Contacts, thereby increasing medicine's role in influencing actions taken by the Missouri General Assembly on issues of importance to our patients and our profession. (1983)

Primary Medical Care

Primary medical care shall be defined as only that care given by a licensed graduate of a medical or osteopathic school. (1977)

Referral to Licensed Limited Practitioner

A physician may refer a patient for diagnostic or therapeutic services to another physician, licensed limited practitioner, or any other licensed provider of health care services whenever the physician feels that these services will benefit the patient. As is the case with physician referrals, limited practitioner referrals should be based on the practitioner's individual competence and ability to perform service to the patient. (1981)

Registered Dietitians

The MSMA supports the concept that any person using the title "dietitian" should be a Registered Dietitian. (1987)

Health Care Decision-Making, Right to Refuse Treatment

Believing that critical decisions should be left to the patient, the family, or health care surrogate, and not to the state, the MSMA opposes any legislation that would require court approval for the withdrawal of life support systems, including artificial hydration and nutrition. The MSMA opposes legislation that would impose an arbitrary waiting period before such life support could be withdrawn. (1990)

Health Care Decision-Making, Surrogate Decision-Maker

The MSMA supports legislation allowing competent Missourians to appoint a health care surrogate, empowered by the patient to make medical decisions for him or her if he or she be unable. Such authority should include the power to accept or refuse any and all medical treatment for the patient, including artificial nutrition and hydration. (1990)

School Bus Safety

The MSMA endorses special pre-licensing examination and investigation of prospective school bus drivers in Missouri, according to criteria established by law. (1986)

Tobacco

The MSMA supports all laws governing tobacco sales, which includes all tobacco products, and that the sale of single cigarettes, sales of cigarettes from vending machines, and tobacco billboard advertising be banned.

MSMA supports the current law whereby the use of tobacco products by minors is illegal and that providers and minors breaking this law should face a fine for both providers and minors, and a revocation of licenses. An increased excise tax and licensure fee should be designated to fund existing local enforcement agencies activities related only to tobacco regulations and local communities should be allowed to establish and enforce local tobacco regulations even if stricter than state regulations. (1995)

The MSMA supports legislation directed at designating nonsmoking areas in public places, and prohibits smoking at all MSMA House of Delegates meetings and scientific sessions held in conjunction with these meetings. (1981)

The MSMA actively supports legislation prohibiting cigarette smoking in public indoor areas. (1983)

Utilization Review, Reimbursement

In those hospitals that conduct utilization review of any inpatient care, compensation of physicians for such review is a legitimate expense. The cost of such review should be included in hospital rates and reimbursable costs regardless of the source of payment. (1976)

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Constitution & Bylaws

(adopted 1903, revised April 1995)

Article I. Name of the Association

The name and title of this organization shall be the Missouri State Medical Association.

Article II. Mission

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

Article III. Membership

Membership in this Association shall be limited to and include all members in good standing in component societies which hold charters from this Association.

Article IV. House of Delegates

The House of Delegates shall be the legislative body of this Association and shall consist of delegates elected by the component societies as well as all Past-Presidents of the Association, the Speaker and Vice-Speaker and the Deans of each medical school located in Missouri who are members of the Missouri State Medical Association, who shall serve as Delegates-at-Large. Its Secretary shall be the Secretary of the Missouri State Medical Association.

Article V. Council

The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall consist of the President, President-Elect, Immediate Past President, Secretary, and Treasurer, the duly elected Councilors from each Councilor District and the duly elected Councilors from the Medical Student Section, the Resident Physicians Section, and the Hospital Medical Staff Section. A majority of voting members of the Council shall constitute a quorum.

Article VI. Council on Ethical and Judicial Affairs

The Council on Ethical and Judicial Affairs shall be the judicial body of the Association. It shall consist of five active members nominated by the President and elected by the House of Delegates.

Article VII. Sessions & Meetings

Section 1. The Association shall hold an annual Spring Convention of the House of Delegates, at places fixed by the House of Delegates, the time of which shall be fixed by the Council. During the Annual Convention, the House shall hold at least three sessions.

Section 2. Special meetings of the Association or the House of Delegates may be called by a two-thirds vote of the Council and shall be called upon a petition signed by members equal in number to one-third of the total number of delegates certified for the last Annual Convention.

Article VIII. Officers

Section 1. The Officers of this Association shall be a President, a President-Elect, three Vice-Presidents, a Secretary, a Treasurer, a Speaker and a Vice-Speaker of the House of Delegates, and Councilors selected as provided for.

Section 2. The Officers shall be elected annually. The term of Councilors and Vice-Councilors shall be two years, except for the duly elected medical student Councilor, resident physician Councilor and hospital medical staff Councilor, who shall each be elected for a one-year term. Half of the membership of the Council shall be elected each year. The delegates from each Councilor District shall meet prior to the last day of the Annual Convention and elect the Councilors and Vice-Councilor from that district. The Delegates from the Medical Student Section, the Resident Physicians Section and the Hospital Medical Staff Section shall meet prior to the last day of the Annual Convention and elect their respective Councilor. In the event of death, resignation or removal of any Councilor, the Vice-Councilor shall automatically fill the vacancy. The Officers shall serve until their successors are elected and installed.

Article IX. Funds, Expenses and Budget

Funds shall be raised by a per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates. Funds may also be raised in any other manner approved by the House of Delegates. The Council shall submit an annual budget to the House of Delegates. All resolutions providing for appropriations shall be referred to the Council and all appropriations approved by the Council shall be included in the annual budget.

Article X. Referendum

At any General Meeting of the Association, it may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote. A majority vote of all members of the Association shall determine the question.

Petitions signed by 10 percent of the active members of the Association, including petitioners representing at least one-half of the component medical societies, will initiate a referendum regarding changes in the Constitution and Bylaws or questions before the House of Delegates. A two-thirds vote of all active members of the Association responding will determine the question.

Article XI. Seal

The Association shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

Article XII. Amendments

The House of Delegates may amend any article of the constitution by a two-thirds vote of the delegates present and voting in any Annual Convention, provided that such amendment shall have been presented in the previous open meeting of the House of Delegates and that the amendment shall have been published twice during the year in the Journal of the Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

Chapter I. Membership

Section 1. Members of this Association shall be those individuals whose names have been certified by secretaries of component societies to the Secretary of this Association that they are duly elected members of a component society and are legally qualified physicians practicing in Missouri, except as otherwise provided. Each member must be of good moral and professional standing, and must not support, nor practice, nor claim to practice any exclusive system of medicine.

Section 2. No person who is under sentence of suspension or expulsion from any component society of this Association or whose name has been dropped from its roll of members shall be entitled to any of the rights or benefits of this Association.

Section 3. There shall be five classes of members as follows:

Active members shall be limited to those members of component societies who (1) hold the degree of Doctor of Medicine or Bachelor of Medicine, and (2) if permitted by the bylaws of the component society, members who hold the degree of Doctor of Osteopathy, and (3) are entitled to exercise the rights of active membership in their component societies, as determined by their component societies, subject to the provisions of these Bylaws.

Resident members shall be limited to those members of the Resident Physicians Section who are serving a full-time postgraduate training program in a hospital approved by the American Medical Association and shall enjoy all of the privileges of active membership.

Student members shall be limited to those members of the Medical Student Section who are pursuing a course of study leading to the degree of Doctor of Medicine in a medical school approved by the American Medical Association and shall enjoy all of the privileges of active membership.

Honor members shall be limited to Honor members of component societies, which societies have requested that active members who have reached advanced years and have long served the Association and the profession be made Honor members of the Association. They shall enjoy all the privileges of active membership and shall be exempt from the payment of dues.

Special Dues-Exempt members shall be limited to those members of component societies who have been elected to the U.S. Congress, the Missouri State Legislature, or to an office in the executive branch of the state or federal government. They shall be exempt from the payment of dues until the term of their political office expires, and shall enjoy all the privileges of active membership.

Chapter II. General Meetings

Section 1. The General Meetings shall be open to all registered members and guests.

Section 2. Any paper read before this Association shall be considered for publication in the Journal if the author so desires. Such papers may be given publication priority over regularly submitted papers but shall be subject to the same editorial review and selection policies.

Section 3. No person in the active practice of medicine in the State of Missouri shall appear on the program of the Association unless that person is a member of the Missouri State Medical Association or sponsored by a member. In the latter situation, the paper would be considered that presented by a member.

Chapter III. House of Delegates

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Convention.

All resolutions received at the Association office no later than 45 days prior to the opening session of the Annual Convention will be accepted as business of the House of Delegates and will be published in the Delegate's Handbook. Any additional resolutions to be introduced at the opening session must be made available to each member of the House of Delegates at least 24 hours before the opening session. These will be accepted as business of the House at the opening session and will be referred to an appropriate Reference Committee. Resolutions introduced at the opening session, but which did not meet the 24-hour deadline, will be referred to a Reference Committee only if approved by two-thirds of the Delegates voting. Sufficient copies of the resolution, printed in standardized format, or funding for same, must be supplied by the individual or society introducing the resolution.

At the second session of the House of Delegates, introduction of Resolutions would be allowed only if approved by two-thirds of the delegates voting. The same procedure with regard to resolutions would be followed at the last session, but it would then take a unanimous vote of the House to allow such introduction. At the discretion of the Speaker, these conditions would not apply for resolutions of good wishes, condolences, congratulations and others of a personal nature.

Section 2. Delegates to the House of Delegates shall be allotted according to the following formula:

(a). Each component society shall be entitled to send each year one delegate or one alternate for each 25 full paid members or fraction thereof in the Association as of December 31 of the previous year.

(b). One additional delegate or alternate is allowed for each 100 members or major fraction thereof as of December 31 of the previous year.

(c). When a component society's full paid membership as of December 31 of the previous year reaches 1,000, that society shall be entitled to an additional 30 delegates or alternates.

(d). When a component society's full paid membership as of December 31 of the previous year reaches 2,000, that society shall be entitled to an additional 50 delegates or alternates.

(e). Each component society which is composed of two or more counties shall be entitled to at least one delegate from each of the counties having one or more member physicians practicing in the county of which the component society is composed; however, such delegates from multi-county component societies must practice or reside in the county they represent. Alternate delegates may be elected from the entire membership of the component medical societies.

(f). All Past-Presidents of the Association, the Speaker and Vice-Speaker, and the deans of each medical school located in Missouri who are members of the Missouri State Medical Association shall serve as Delegates-at-Large.

(g). Only duly elected delegates have the privilege of the floor at meetings of the House of Delegates. However, any delegate may request the privilege of the floor for any other individual, which privilege may be granted or denied by the Speaker, subject to disapproval by a majority vote of the House of Delegates.

Section 3. Each Medical School Component Society shall be entitled to send each year two delegates, elected by the component society, to represent the Medical Student Section in the House of Delegates at the Annual Convention. Each delegate shall be a member in good standing with this Association and the component society. Such student delegates shall enjoy all the rights and privileges of all other delegates.

Section 4. The Resident Physicians Section shall be entitled to send each year six delegates elected by the Section to the House of Delegates at the Annual Convention. Each delegate shall be a member in good standing with this Association. Such resident delegates shall enjoy all rights and privileges of all other delegates.

Section 5. The Hospital Medical Staff Section shall be entitled to send each year one delegate elected by the Section to the House of Delegates at the Annual Convention. Each delegate shall be a member in good standing with this Association and the Section. Such delegates shall enjoy all rights and privileges of all other delegates.

Section 6. Forty delegates shall constitute a quorum of the House of Delegates. All meetings of the House of Delegates shall be open to members of the Association.

Section 7. From among members of the House of Delegates, the Speaker shall appoint reference committees to which reports and resolutions, on a majority vote of the House of Delegates, shall be referred as follows:

Reference Committee A
Reference Committee B
Reference Committee C
Reference Committee D
Reference Committee E

The Speaker may appoint such other reference committees as deemed necessary, upon approval of the House of Delegates.

The President shall appoint a Committee on Credentials.

Section 8. The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Section 9. The House of Delegates shall divide the state into Councilor Districts, specifying which counties each district shall include and, when the best interest of the Association and the profession will be promoted thereby, organize in each a district medical society of which all members of the component societies shall be members.

Section 10. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate on their reports.

Section 11. The House of Delegates shall receive and act upon a complete detailed annual audit of receipts and expenses of the preceding year and a proposed budget for the current calendar year which shall have been prepared by the Council and submitted to the component societies at least four weeks prior to the Annual Convention. These shall be published in the Journal.

Section 12. The following shall be the general order of business of the House of Delegates for the first session of the Convention.

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll Call.
4. Reading and adoption of minutes.
5. Report of officers.
6. Report of committees.
7. Unfinished business.
8. New business.

The following shall be the general order of business of the House of Delegates for the last session of the Convention.

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll Call.
4. Reading and adoption of minutes.
5. Election of officers.
6. Reports of officers.
7. Reports of committees.
8. Unfinished business.
9. New business (Chap. III, Sec. 1).
10. Installation of officers.
11. President's appointments and installation of members to committees.
12. Selection of the place for the next Annual Convention.

At any session of the House of Delegates, the order of business may be changed by a two-thirds affirmative vote of the members present and voting.

Chapter IV. Election of Officers

Section 1. The President, on the first day of the Annual Convention, shall select a Committee on Nominations consisting of thirteen delegates, one from each Councilor District, one from the Medical Student Section, one from the Hospital Medical Staff Section and one from the Resident Physicians Section.

The Committee on Nominations shall determine that proposed candidates for office are qualified and willing to serve and shall report at the Second Session to the House o Delegates in the form of a ticket containing the names of one or more members for each of the officers listed in Article VIII of the Constitution, which are to be filled at the Annual Convention, excepting the Secretary and Treasurer, who are elected by the Council from the general membership.

Section 2. All contested elections shall be by written ballot. A majority of the votes cast shall be necessary to elect.

Delegates and Alternates for the American Medical Association shall be elected as follows:

The Nominating Committee shall propose one or more candidates for each delegate position for a full two-year term, one or more candidates for each alternate position for a full two-year term, and one or more names for each unexpired position.

When a nomination for AMA delegate term is contested, the AMA delegates shall be elected by ballot. Each MSMA delegate may have one vote for each delegate to be elected and each vote shall be cast for a different nominee. A nominee is elected if he/she receives votes on the majority of the ballots cast, and has the highest number of votes cast for that position. If all vacancies for AMA delegates are not filled on the first ballot, then subsequent ballots will be taken with the nominee receiving the fewest number of votes cast in each subsequent ballot dropping out of consideration on the next ballot and each MSMA delegate casting one vote for each position in each subsequent ballot until one nominee for each position is elected.

The election for AMA alternates and an election to fill an unexpired term will be conducted in the same manner.

In case no nominee for general offices of the Association (see Article VIII, Constitution) receives a majority of the votes on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when that nominee shall be declared elected.

Section 3. Nothing in this chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Section 4. Delegates present at the Annual Convention from Councilor Districts whose Councilors' and Vice-

Councilor's terms expire shall hold meetings on or before the morning of the last day of the Annual Convention and elect Councilors and a Vice-Councilor for their district for a term of two years. The names of the elected Councilors and Vice-Councilors shall be given on prescribed forms to the Secretary for presentation to the House of Delegates. Each candidate for Councilor or Vice-Councilor must reside or practice in the district for which that candidate is elected.

Section 5. Each Councilor District shall be entitled to one Councilor for each 400 full paid members or portion thereof and full paid members of the Resident Physicians Section training in that Councilor District as of December 31 of the preceding year. Each District shall be entitled to one Vice-Councilor.

Section 6. Delegates from the Medical Student Section shall combine and elect one Councilor and one Vice-Councilor. The duly elected Councilor and Vice-Councilor from the medical student component societies shall serve on an annual renewable basis.

Section 7. Delegates from the Resident Physicians Section shall combine and elect one Councilor and one Vice-Councilor. The duly elected Councilor and Vice-Councilor from the Resident Physicians Section shall serve on an annual renewable basis.

Section 8. The Hospital Medical Staff Section shall combine and elect one Councilor and one Vice-Councilor. The duly elected Councilor and Vice-Councilor from the Hospital Medical Staff Section shall serve on an annual renewable basis.

Section 9. The Speaker and Vice-Speaker shall not serve more than three consecutive terms.

Section 10. The Speaker shall appoint a parliamentarian to serve as such during the sessions of the House of Delegates at each Annual Convention and upon whom the Speaker may call before deciding points of order or procedure.

Chapter V. Duties of Officers

Section 1. The **President**, or a designated representative, shall preside at scientific sessions of the Association. The President shall preside at the House of Delegates in the absence of the Speaker or Vice-Speaker and until their successors are elected. The President shall appoint all committees not otherwise provided for. The President shall deliver an annual address at such times as may be arranged and shall perform such other duties as custom or parliamentary usage requires. The President shall be the real head of the profession of the state and assist the Councilors in building up the component societies and in making their work more practical and useful.

Section 2. The **President** and the **President-Elect** shall be members of the Council and shall attend all meetings of the Council. The President-Elect shall assume the office of the President at the Annual Convention following the election to the position of President-Elect. Should the office of President-Elect become vacant through death or otherwise, the Council may fill the vacancy by appointment until the next Annual Convention.

Section 3. The **Vice-Presidents** shall assist the President in the discharge of presidential duties. Prior to the meeting of the Nominating Committee, the President-Elect shall recommend to the Nominating Committee the name of a member to serve as First Vice-President. In the event of the death, resignation, or removal of the President, the First Vice-President shall serve as President for the unexpired term.

Section 4. The **Treasurer** shall give bond in the sum of $50,000. The Treasurer shall demand and receive all funds due the Association, together with bequests and donations. Money shall be paid out of the treasury only on the written order of the President and Executive Vice-President, the President and Treasurer, or the Treasurer and Executive Vice-President. The Treasurer shall subject the accounts to such examination as the House of Delegates may order, and shall annually render an account of treasury actions and of the state of the funds in his/her hands.

Section 5. The **Secretary** shall attend the General Meeting of the Association and the sessions of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He/She shall be Secretary of the Council and shall keep a record of its proceedings. The Secretary shall be the custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association that come into his/her hands. The Secretary shall provide for the registration of the members and delegates at the Annual Convention. The Secretary shall, with the cooperation of the secretaries of the component societies, keep a register of all the legal practitioners of the state by counties, noting on each the status in relation to the practitioner's component society, and shall transmit a copy of this list to the American Medical Association, transmitting to its secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month. The Secretary shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. The Secretary shall employ such assistants as may be ordered by the Council and shall make an annual report to the House of Delegates. The Secretary shall supply all component societies with the necessary blanks for making their reports and shall collect from them the regular per capita dues and assessments and turn the same over to the Treasurer.

Chapter VI. Council

Section 1. The Council shall meet during the Annual Convention and at such times as necessity may require, subject to the call of the Chair or on petition of three Councilors. It shall meet on the last day of the Annual Convention to organize. The Council shall elect a Chair and a Vice-Chair for a term of one year. The Chair may be reelected to serve not more than four consecutive terms of one year each. The Council shall, through its Chair, make an annual report to the House of Delegates.

Section 2. Each Councilor shall be organizer, peacemaker and censor for his/her district. The Councilor shall visit each county in the district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and to keep in touch with the activities of and aid in the betterment of the component societies of the district. The Councilor shall make reports of the work and the condition of the profession of each county in that district to the Council. The necessary traveling expenses incurred by each Councilor in the line of duties herein imposed may be allowed on a properly itemized statement submitted monthly and within the current year, including the expense in attending the Annual Convention of the Association. No Councilor shall be eligible for the position of Delegate to the House of Delegates during his/her term of office as Councilor, nor shall a Councilor vote in the House of Delegates.

Section 3. The Council shall be the executive body of the Association and between the Annual Conventions shall exercise the power conferred on it by the House of Delegates under the Constitution and Bylaws.

Section 4. Charters shall be issued to component societies only on approval of the Council and shall be signed by the President and Secretary of this Association. Upon the recommendation of the Council, the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and Bylaws.

Section 5. In sparsely settled sections, the Council shall have authority to organize the members of two or more counties into societies, to be suitably designed so as to distinguish them from district societies. These societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Section 6. The Council shall provide for and supervise the issuance of all publications of the Association including proceedings, the transactions and memoirs, and shall have authority to appoint an Editor and such assistants as it deems necessary. It shall prescribe the methods of accounting and through a committee of three of its members, to be known as a Committee on Auditing and Appropriations, shall audit all accounts of this Association. The Council shall adopt an annual budget providing for the necessary expenses of the Association for the following calendar year. This budget shall be prepared and presented for consideration in the last quarter of each year by the Committee on Auditing and Appropriations. A complete and detailed report shall be submitted to the component societies as provided in Chapter III, Section 11. The Council shall submit an annual report to the House of Delegates which shall specify the character and cost of the publications of the Association, the amount and character of all its property, and shall provide full information concerning the management of all affairs of the Association which the Council is charged to administer.

Section 7. The Council shall appoint, at least six months prior to the Annual Convention, a committee consisting of three of its members to be known as the Committee on Arrangements for the Annual Convention. On recommendation of the Committee, the Council shall appoint a Chair of a Local Committee on Arrangements, who shall be a member of the component society of the county in which the Annual Convention is to be held, and who shall appoint and organize from the members of the component society the personnel of the Local Committee on Arrangements. The Local Committee on Arrangements shall serve as host for the Annual Convention and shall also act in an advisory capacity for the staff of the Executive Vice-President of the Association, who is responsible for arrangements for the Annual Convention.

Section 8. The Council shall by appointment fill any vacancy in office not otherwise provided for which may occur during the interval between Annual Conventions of the House of Delegates; the appointee shall serve until the successor has been elected and has qualified.

Section 9. The salaries of all employees of the Association shall be fixed by the Council.

Section 10. The Council shall provide such headquarters for the Association as may be required to conduct its business properly.

Section 11. The Council shall be empowered to elect an Executive Vice-President and such other personnel as may be necessary, who need not be members of the Missouri State Medical Association, each of whom shall perform such duties as the Council may designate and receive such salary and serve for such periods and under such conditions as the Council may determine.

Chapter VII. Committees and Commissions

Section 1. Standing Committees of the Missouri State Medical Association, the Chairs of which shall be appointed by the Association President unless otherwise provided in these Bylaws, will be as follows:

Executive Committee.
Committee on Constitution and Bylaws.
Committee on Publication.
Committee on Legislative Affairs.
Committee on Planning.
Physicians Health Committee.
Young Physicians Committee

The **Executive Committee** shall consist of the Association President, the Immediate Past President, President-Elect, First Vice President, Secretary, Treasurer, Council Chair and Council Vice-Chair. The President of the Association shall be Chair of the Executive Committee. The Executive Committee shall plan and execute such work as may be necessary for the welfare of the Association and the conduct of the Executive Vice-President's Office between meetings of the Council, but shall be responsible at all times to the Council.

The Committee on **Constitution and Bylaws** shall consist of five members named by the President and shall propose such amendments to the Constitution and Bylaws as are deemed wise and expedient and bring before the House of Delegates such amendments as it or other members of the Association may present for consideration. The President shall appoint one member for one year, two members for two years and two members for three years. As the term of each expires, a successor shall be appointed for a term of three years.

The Committee on **Publication** shall consist of five members and be appointed annually by the Council and shall be responsible for general publication and distribution policies of the Journal. The editor of the Journal shall be designated by the Council and also shall serve as Chair of the Committee on Publication. The Editor shall be empowered to nominate an Editorial Board, subject to approval by the Council. The members of the Editorial Board will assist the Editor in soliciting, preparing and reviewing material for publication in the Journal.

The Committee on **Legislative Affairs** shall consist of five members of the Association, appointed annually by the President. The Committee shall consider legislative proposals affecting health problems of the people of the state and the practice of medicine and shall make recommendations to the Council and the House of Delegates as well as directing staff activities in such matters.

The **Planning Committee** shall consist of ten members to be appointed by the President. Two members shall be appointed for one year, two for two years, two for three years, two for four years and two for five years. As the term of each expires, a successor shall be appointed for a term of five years. In making such appointments, the President shall be governed by experience of the member, the size of the respective medical society and geographical area, so as to have a representative committee. Age of the members shall be considered to the end that one-third to one-half of the committee shall be of an age group that should contemplate ten to twenty years more of active practice.

The **Physicians Health Committee** shall consist of members of the Association appointed by the President for a term of three years. The Physicians Health Committee shall plan and execute programs of professional assistance for members of this Association who may require assistance to continue or return to their professional activities.

The **Young Physicians Committee** shall consist of members of the Association appointed by the President for a term of three years. The Young Physicians Committee shall act as a vehicle for increasing the involvement of young physicians in the membership activities of the Missouri State Medical Association.

Section 2. Standing Commissions of the Missouri State Medical Association, who shall be responsible to the Council and whose Chairs shall be appointed by the Association President, will be as follows:

Commission on Public Affairs.
Commission on Medical Economics, Third Party Medicine and Governmental Relations.
Commission on Continuing Education and Health Manpower.
Commission on Medical-Legal Affairs.
Commission on Interspecialty Medicine.

Subsec. a. The standing commissions, unless otherwise provided in these Bylaws, shall consist of fifteen members serving three-year terms and the terms will be staggered so that the President will appoint five members of each Commission each year. Initially, the President will appoint five members to one-year terms, five members to two-year terms and five members to three-year terms and no member shall serve more than two consecutive terms.

Subsec. b. The Chair of each Commission may appoint Ad Hoc Committees to carry out the Commission's programs. These Ad Hoc committees may include any Missouri State Medical Association member.

Subsec. c. The Chair of the Council shall appoint each year an appropriate Councilor to serve as advisor to each respective Commission.

The Commission on **Public Affairs** shall plan and execute programs designed to enhance the relationship between the public and the medical profession. The Commission shall have responsibility in the fields of industrial health, environmental health, medicine and religion, trauma, disaster medical care and national defense and other public matters.

The Commission on **Medical Economics, Third Party Medicine and Governmental Relations** shall keep close liaison and work with peer and utilization review mechanisms, insurance intermediaries and governmental agencies.

The Commission on **Continuing Education and Health Manpower** shall determine the character and scope of the scientific proceedings of the Association for each Annual Convention as well as to make all arrangements for such Annual Convention, subject to the instructions of the House of Delegates. The Commission shall also be responsible for the entire continuing education program of the Association, shall have all matters pertaining to hospitals referred to it, shall carry on all programs in the recruitment of health manpower in professional as well as in allied health fields and shall be responsible for programs in the rural health field.

The Commission on **Medical-Legal Affairs** shall investigate and study medical-legal matters affecting the practice of medicine, make recommendations to the Council and House of Delegates and also make certain that all Association members are kept informed of important developments in this field. The Commission also may work with similar groups formed by the State Bar Association on matters of joint interest and concern as well as with governmental and insurance agencies in this field.

The Commission on **Interspecialty Medicine** shall be composed of one representative of each statewide specialty group as recognized by the Association Council. The President of the Missouri State Medical Association shall appoint annually to the Commission a representative from each of the authorized groups as submitted to the President by the specialty organization. In the event that such a nominee is not submitted by an organization, the Association President may designate a member of the specialty group to serve on the Commission.

The Commission shall be charged with the responsibility of reviewing organization problems with respect to scientific programs, socioeconomic and legislative matters that affect their particular specialties; in addition, the Commission shall have the responsibility for programs and activities in fields relating to disease and health services involving the citizens of our state and such other matters as the Council shall direct. Also, the Commission shall provide close liaison between the various specialty organizations and the Missouri State Medical Association.

Section 3. Fifty percent of a Committee or a Commission should be present at an official meeting to constitute a quorum.

Section 4. Special committees may be appointed by the President or the Council as circumstances may demand.

Chapter VIII. Medical Student Section

Section 1. Membership. Membership in the section shall be limited to Missouri State Medical Association members who are also students at an accredited medical school in the state of Missouri. The Section shall be the unifying body for the four independent Medical School Component Societies in the state.

Section 2. Governing Council. There shall be a Governing Council of the Medical Student Section to direct the programs and activities of the section, subject to the approval of the MSMA Council.

Section 3. Members of the Governing Council. There shall be five voting members of the Governing Council, consisting of the officers, the Student Councilor and the Student Vice-Councilor.

(a). Officers. The officers of the section shall have the following duties and responsibilities:

(b). Chair. The Chair shall preside at the business meetings of the section and at meetings of the Governing Council.

(c). Vice Chair. The Vice Chair shall assist the Chair and preside in the absence of the Chair or at his/her request.

(d). Secretary-Treasurer. The Secretary-Treasurer shall maintain such records and accounts as may be necessary or advisable for the conduct of the activities of the section.

(e). Councilor and Vice-Councilor. The Councilor and Vice-Councilor shall be elected by the members of the respective Medical School Component Society. The following sequence shall be used in determining the Medical School Component Society from which the Councilor and Vice-Councilor shall be elected on an annual rotating basis: Washington University, St. Louis University, the University of Missouri-Kansas City, the University of Missouri-Columbia.

(f). Delegates. Each Medical School Component Society shall elect two Delegates to represent the Medical Student Section in the MSMA House of Delegates.

Section 4. Term. Governing Council members, including the Councilor and Vice-Councilor shall serve one-year terms, beginning at the conclusion of the Annual Convention at which they were elected.

Section 5. Vacancies. Any vacancy occurring on the Governing Council shall be filled at the next business meeting of the Section.

Section 6. Section Meeting. There shall be a meeting of members of the section held prior to each Annual Meeting of the MSMA House of Delegates.

Section 7. Representatives to the Section Meeting. The annual meeting of the Section shall be open to any member of the Medical Student Section.

Section 8. Purpose of the Business Meeting. The purpose of the business meeting shall be:

(a). To hear such reports as may be appropriate.

(b). To consider and vote upon such matters as may properly come before the meeting.

(c). To adopt resolutions for submission by the section to the House of Delegates of the MSMA.

(d). To elect a Chair, Vice Chair, and Secretary-Treasurer.

(e). To conduct such other business as may properly come before the meeting.

Chapter IX. Hospital Medical Staff Section

Section 1. Membership. Membership in the section shall be limited to Missouri State Medical Association members who are also members of a hospital medical staff in a Missouri hospital, and who are selected by the physician members of their respective medical staffs.

Section 2. Governing Council. There shall be a Governing Council of the Hospital Medical Staff Section to direct the programs and activities of the section, subject to the approval of the MSMA Council.

Section 3. Members. There shall be five voting members of the Governing Council, consisting of the officers, delegate and alternate delegate, elected at the business meeting of the section.

(a). Officers. The officers of the section shall have the following duties and responsibilities:

(b). Chair. The Chair shall preside at the business meetings of the section and at meetings of the Governing Council.

(c). Vice Chair. The Vice Chair shall assist the Chair and preside in the absence of the Chair or at his/her request.

(d). Secretary-Treasurer. The Secretary-Treasurer shall maintain such records and accounts as may be necessary or advisable for the conduct of the activities of the section.

(e). Delegate and Alternate Delegate. The Delegate and Alternate Delegate shall represent the members of the section in the MSMA House of Delegates.

Section 4. Term. Governing Council members, including the Delegates and Alternate Delegate, shall serve two-year terms, beginning at the conclusion of the Annual Convention at which they were elected.

Section 5. Vacancies. Any vacancy occurring on the Governing Council shall be filled at the next business meeting of the Section.

Section 6. Business Meeting. There shall be a business meeting of members of the section held prior to each Annual Meeting of the House of Delegates.

Section 7. Representatives to the Business Meeting. The physician members of the medical staff of each hospital may select a representative to the business meeting of the Hospital Medical Staff Section. The representative must be an MSMA member who is an active voting member of the medical staff with clinical privileges at the hospital.

Representatives to the business meeting shall be elected by and from the active voting members of the medical staff of each hospital.

Representatives to the business meeting shall be properly certified by the President or Secretary of the medical staff.

Only duly selected representatives to the Hospital Medical Staff Section shall have the right to vote at the business meeting of the section, but the meeting shall be open to any member of the MSMA. The meeting shall be conducted pursuant to rules of procedure adopted by the Governing Council of the section and approved by the MSMA Council.

Section 8. Purposes of the Business Meeting. The purpose of the business meeting shall be:

(a). To hear such reports as may be appropriate.

(b). To consider and vote upon such matters as may properly come before the meeting.

(c). To adopt resolutions for submission by the section to the House of Delegates of the MSMA.

(d). To elect at the business meeting prior to the Annual Convention of the MSMA House of Delegates a Chair, Vice Chair, Secretary-Treasurer, Delegate and Alternate Delegate.

(e). To conduct such other business as may properly come before the meeting.

Chapter X. Resident Physicians Section

Section 1. Membership. The Resident Physicians Section shall be composed of Resident Members of the Missouri State Medical Association who are serving in approved training programs.

(a). Governing Council. There shall be a Governing Council for the Resident Physicians Section. The Governing Council shall consist of the officers of the Resident Physicians Section and two members-at-large of the Section. All members of the Governing Council must be Resident Physician members of the Missouri State Medical Association elected by the members attending the Business Meeting of the Resident Physicians Section.

1. Duties. The Governing Council shall direct the programs and the activities of the Resident Physicians Section.

2. Vacancies. Any vacancy occurring on the Governing Council shall be filled at the next Business Meeting of the Resident Physicians Section.

Section 2. Officers. The Members attending the Business Meeting of the Resident Physicians Section shall elect the following officers, who shall have these duties and responsibilities:

(a). Chair. The Chair shall preside at all meetings of the Governing Council and the Business Meetings of the Resident Physicians Section.

(b). Vice Chair. The Vice Chair shall preside at meetings of the Governing Council or the Business Meetings of the Resident Physicians Section, in the absence of the Chair or at the request of the Chair.

(c). Secretary. The Secretary shall maintain such records as are required or advisable for the conduct of the activities of the Resident Physician Section.

(d). Delegates and Alternate Delegates. The Delegates and Alternate Delegates shall represent the Section in the MSMA House of Delegates.

Section 3. Business Meeting. There shall be a Business Meeting of members of the Resident Physicians Section. The Business

Meeting shall be held on a day prior to each Annual Meeting of the House of Delegates.

Section 4. Rules of Order. Only members of the Resident Physicians Section shall have the right to vote, but the meetings shall be open to any members of the Missouri State Medical Association. The meeting shall be conducted pursuant to established rules of procedure adopted by the Governing Council.

Section 5. Purposes of the Meeting. The Purpose of the meeting shall be:

(a). To hear such reports as may be appropriate.

(b). To elect a Chair, who shall serve until the conclusion of the next Annual Meeting.

(c). To elect other officers of the Resident Physicians Section and two members-at-large of the Governing Council. Those elected shall assume office at the conclusion of the Annual Meeting at which they are elected and shall serve until the conclusion of the next Annual Meeting.

(d). To consider and vote upon such matters as may properly come before the meeting.

Chapter XI. Dues and Assessments

Section 1. (a). The annual dues of this Association shall be $300, which shall be applicable to each active member of the Association beginning in 1987 and shall be levied per capita on the active members of the component societies; physicians leaving training programs and entering practice for the first time shall be assessed dues of $150 for the first calendar year and shall be Active members; physicians entering their second year of practice shall be assessed dues of $225 for the calendar year and shall be Active members; the per capita levy for resident members shall be $20 per year; student members shall be assessed dues of $5 per year; honor members shall not be required to pay dues. Dues shall be payable on January 1 of the year for which they are levied. Those members who join after July 1 of any given year shall be assessed at one-half of their regular dues rate, outlined in this section, for the calendar year in which they join.

Section 2. Three dollars of the annual dues shall be credited to the account of the Journal for each member's annual subscription. The remainder of the amount shall be credited to the general fund of the Association.

Section 3. The House of Delegates may, when in its judgment the best interest of the Association demands, recommend an assessment on each active, resident and student member. Such assessment shall be levied only by consent of two-thirds of the members of the House of Delegates present and voting. Funds obtained from such special assessment shall be allocated only for the purposes for which such assessment is levied and in accordance with substantiating budgets. Unexpended balances from such assessments must be reported to the House of Delegates for reallocation.

Section 4. The Secretary of each component society shall cause to be collected and remitted to the Treasurer of this Association the per capita levies. Upon authorization of any component society, the Treasurer of this Association may collect the per capita levies directly from the members of that component society. Any member whose name has not been reported for enrollment and whose dues have not been remitted to the Treasurer of this Association on or before March 1 shall stand suspended until his/her name is properly reported and his/her dues for the current year are paid. On December 31 of each year, members delinquent in payment of dues, and assessment if such has been made, or any part thereof shall, ipso facto, forfeit their memberships. No suspended member shall be eligible to register at an Annual Convention.

Chapter XII. Rules of Conduct

Section 1. The ethical principle governing the members of the American Medical Association shall govern members of this Association.

Section 2. Any member of this Association who testifies as a medical expert witness outside of the specialty of the physician represents unethical conduct. In the future, any physician who testifies as a medical expert witness outside of his/her specialty or logical extension of his/her field of expertise or who interferes with the proper administration of justice by misrepresenting his/her qualifications or giving false or misleading testimony will be subject to expulsion, censorship, or reprimand after due process from the Missouri State Medical Association.

Any member of this Association who testifies as a medical expert witness without meeting the qualifications set forth in this section, shall be subject to expulsion, censorship, or reprimand after a due process hearing as set forth. An expert witness must have basic educational and professional knowledge as a general foundation for his/her testimony and, in addition, have current personal experience and practical familiarity with the problems being considered and be actively engaged in the practice of the medical subject under discussion.

Nothing in the above is to be construed as preventing the treating physician from testifying on the merits of the case.

Chapter XIII. Rules of Order

The deliberations of this Association shall be conducted in accordance with usages as defined in *Davis' Rules of Order.*

Chapter XIV. Component Societies

Section 1. All component societies now in affiliation with the State Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws shall, upon application to the Council, receive charters from this Association provided that their Constitutions and Bylaws shall have been submitted to the Council and received its approval.

Section 2. Each component society shall be judge of the qualifications of its members, subject to review and final decision by the Council on Ethical and Judicial Affairs of the State Association. Every reputable and legally qualified physician or medical student who does not practice, nor profess to practice sectarian medicine, and who resides or practices in the same county, who shall apply for membership on the prescribed form and subscribe for the Journal and pay the annual dues and assessments for the current year, shall be eligible for election to membership.

A member of a component society whose license has been revoked shall be dropped from membership automatically as of the date of revocation. The Council on Ethical and Judicial Affairs of the State Association shall have final authority to expel a member should a component society fail to do so after being so requested by the Council on Ethical and Judicial Affairs.

The Council, may upon request of a component society, remit the state dues and assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the three consecutive years immediately preceding the disability; provided that the component society shall remit the component society dues of such member.

The Council may, upon request of a component society, remit the state dues and assessments of a deserving member found to fall within what is classified as a hardship case, during the period of said hardship until such time as the dues again become payable; provided that the component society shall remit the component society dues of such member.

A physician living near a component society boundary line may hold membership in that component society most convenient for the physician to attend, on permission of the component society in whose jurisdiction the physician resides.

Section 3. Any member who may feel aggrieved by the action of the component society in suspending or expelling him/her shall have the right to appeal to the Council on Ethical and Judicial Affairs, whose decision shall be final. A component society shall at all times be permitted to appeal or refer questions involving membership to the Council on Ethical and Judicial Affairs of the State Association for final determination.

Section 4. In hearing appeals, the Council on Ethical and Judicial Affairs may admit oral or written evidence or both as in its judgment will most fairly present the facts.

Section 5. When a member in good standing in a component society moves to another jurisdiction in this state, the member shall be given a written certificate of these facts by the secretary of the society, without cost, for transmission to the secretary of the society in the jurisdiction to which he/she moves. Pending the acceptance or rejection by the component society to which the physician moves, such member shall be considered to be in good standing in the component society from which he/she was certified and in the State Association to the end of the period for which dues have been paid.

A member of a component society who moves to and engages in the practice of medicine at a location in another area in which there is a component society shall forfeit membership in this Association and the Secretary shall remove the member's name from the roster of members of the Missouri State Medical Association unless within one year after such change of residence he/she becomes a member of the component society of the area to which he/she has moved.

Section 6. Each component society shall have general direction of the affairs of the profession in its area and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician and medical student in the area. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it includes every eligible physician and medical student in the area.

Section 7. At some meeting in advance of the Annual Convention of this Association, each component society, the Hospital Medical Staff Section, the Medical Student Section and the Resident Physicians Section shall elect one or more delegates and an equal number of alternates to represent it in the House of Delegates of this Association, in accordance with Chapter III, Section 2, 3, 4, or 5 of these Bylaws. The Secretary of each component society, the Hospital Medical Staff Section, the Medical Student Section and the Resident Physicians Section shall send a list of such delegates and alternates to the Secretary of this Association at least sixty days before the Annual Convention. Representation in the House of Delegates shall be contingent on compliance with the foregoing provisions.

Section 8. The secretary of each component society shall keep a roster of its members and, if practicable, a list of nonaffiliated physicians, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary by the Council. He/She shall send a copy of the program of each meeting to the district Councilor and to the Secretary of the State Association.

Section 9. Any component society, in a manner approved by the State Association, or the State Association with the consent of the component society affected, may undertake, organize and put into effect plans for the medical care of indigent persons or indigent groups, and low-income groups, by agreements with physicians, public officials or others and by the use of contributions, cooperative funds or other means; provided, however, that a free choice of the available and participating physicians in that territory shall be allowed to the patient and that all relationships shall be and remain as though it were strictly an individual employment.

Chapter XV. Council on Ethical and Judicial Affairs

Section 1. The Council on Ethical and Judicial Affairs shall have original jurisdiction in all questions involving Missouri State Medical Association membership, all controversies arising under the Constitution and Bylaws and under the rules of conduct as outlined in the Bylaws, and controversies between two or more component societies or their members. The Council on Ethical and Judicial Affairs shall be the judicial authority of the Missouri State Medical Association and its decisions shall be final. The Council on Ethical and Judicial Affairs shall also investigate general ethical conditions and matters pertaining to the relations of physicians to one another or to the public and make recommendations to the House of Delegates or the component societies.

Section 2. The Council on Ethical and Judicial Affairs shall be composed of five members elected to five-year terms. Nominees shall be submitted by the President for election by the House of Delegates. Any vacancy occurring on the Council on Ethical and Judicial Affairs shall be filled by nomination of the President and election by the House at its next Convention for the remainder of the unexpired term. The first five members of the Council on Ethical and Judicial Affairs shall be elected on a staggered basis; one for one year, one for two years, one for three years, one for four years, and one for five years.

Section 3. The Council on Ethical and Judicial Affairs shall select a Chair and Vice Chair and it may adopt such rules and regulations as it deems necessary and appropriate for the conduct of its affairs, subject to approval by the Missouri State Medical Association Council.

Chapter XVI. Amendments

Section 1. These Bylaws may be amended at any Annual Convention by a two-thirds vote of the delegates present and voting at that session, if the proposed amendment has been properly submitted to the House of Delegates and has lain on the table for one day.

Section 2. Upon the adoption of this Constitution and these Bylaws, all previous constitutions and bylaws are thereby repealed.

Chapter XVII. Mission

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

Component Medical Societies

Andrew Co. Medical Society
Bharata Lankachandra, MD
Secretary
803 Highway 71 West
Savannah, MO 64485
(816) 324-3121

Audrain Co. Medical Society
Glenn L. Gordon, MD, Secretary
714 Medical Park Dr.
Mexico, MO 65265
(314) 581-7196

Barton Co. Medical Society
Thomas W. Carroll, MD, Secretary
1204 Gulf Street
Lamar, MO 64759
(417) 682-5584

Boone (Cooper & Howard) Co. Medical Society
Jan K. Frank, Exec. Director
111-B East Walnut
Columbia, MO 65203
(314) 874-8985

Buchanan Co. Medical Society
Patty Moore, Exec. Secretary
5325 Faraon
St. Joseph, MO 64506
(816) 271-7517

Butler-Wayne-Ripley-Carter Medical Society
Carolyn Depriest, Exec. Secretary
P.O. Box 3986
Poplar Bluff, MO 63901
(314) 686-3171

Callaway Co. Medical Society
Vernon Jackson, MD, Secretary
211 E. 14th St.
Fulton, MO 65251

Cape Girardeau Co. Area Medical Society
Lois Kasten, Exec. Director
1021 N. Kingsway, Ste. 8
Cape Girardeau, MO 63701
(314) 334-5691

Chariton-Macon-Monroe-Randolph Medical Society
Robert V. Tompson, MD,
Secretary
RR #4, Box 200 T
Moberly, MO 65270
(816) 263-6045

Clay-Platte Medical Society
Mrs. Kelly Carter, Exec. Director
3036 Gillham Road
Kansas City, MO 64108
(816) 531-8432

Clinton Co. Medical Society
Larry Ozenburger, MD, Secretary
400 Clay
Plattsburg, MO 64477

Cole (Moniteau & Osage) Co. Medical Society
Jan K. Frank, Exec. Director
111-B East Walnut
Columbia, MO 65203
(314) 874-8985

Dallas-Hickory-Polk-Dade Medical Society
Ben Koon, MD, Secretary
1300 N. Oakland
Bolivar, MO 65613
(417)326-6021

Dunklin Co. Medical Society
Nicholas F. Robinson, MD,
Secretary
501 Teaco Road
Kennett, MO 63857
(314) 888-6603

Franklin-Gasconade-Warren Medical Society
Thomas D. Grisham, MD, Secretary
#3 Woodbine Ct.
Washington, MO 63090
(314) 239-8011

Grand River Medical Society
Jin S. Yoon, MD, Secretary
103 11th Street
Chillicothe, MO 64601
(816) 646-3746

Greene Co. Medical Society
Joseph C. Brown, Executive V.P.
1200 E. Woodhurst Bldg., D-200
Springfield, MO 65804
(417) 887-1017

Henry Co. Medical Society
Kenneth F. Scott, MD, Secretary
603 Gaines Dr.
Clinton, MO 64735
(816) 885-8141

Jasper Co. Medical Society
Judy Miller, Exec. Director
P.O. Box 2424, 2431 S. Rangeline
Joplin, MO 64803
(417) 624-3920

Jefferson Co. Medical Society
Alfred D. Shaplin, MD, Secretary
910 Kimswick Manor Lane
Ballwin, MO 63011
(314) 933-1055

Johnson Co. Medical Society
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513 Burkarth Rd.
Warrensburg, MO 64093
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Lafayette-Ray Medical Society
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Waverly Clinic
Waverly, MO 64096
(816) 493-2262

Lake of the Ozarks Med Society
Melvin R. Hayden, MD, Secretary
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(314) 346-5624

Metro Med of Greater K. C.
Ron Cosens, Exec. Director
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(816) 531-8432

Mid-Missouri Medical Society
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Columbia, MO 65203
(314) 874-8985

Mineral Area Medical Society
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128 W. Russell St., P.O. Box 85
Ironton, MO 63650
(314) 546-3434

Montgomery Co. Med. Society
Sam J. Byland, MD, Secretary
120 Hudson Street
Wellsville, MO 63384

North Central Medical Society
Ronald L. Phillips, MD
1201 S. Baltimore
Kirksville, MO 63501
(816) 665-3838

Northeast Mo. Medical Society
Michael Bukstein, MD, Secretary
711 Grand
Hannibal, MO 63401
(314) 221-5250

Northwest Mo. Medical Society
James Humphrey, MD,
Secretary
502 State Street
Mound City, MO 64470
(816) 442-5464

Ozarks Medical Society
Richard Betz, MD, Secretary
113 West Hickory St.
Neosho, MO 64850
(417)451-1234

Pemiscot Co. Medical Society
Tracy Durham, Exec. Secretary
Hwy. 61- Reed St., P.O. Box 489
Hayti, MO 63851

Perry-Ste. Genevieve Med Society
Dan Frissell, MD, Secretary
Hospital Lane & Center Dr.
Ste. Genevieve, MO 63670
(314) 883-2782

Pettis Co. Medical Society
Rodney Hartman, MD, Treasurer
1735 Sycamore, Rt. 3
Sedalia, MO 65301
(816) 826-0216

St. Charles-Lincoln Med. Society
Deonna Randall, Exec. Secretary
St. Charles Clinic, 2850 West Clay
St. Charles, MO 63301
(314) 925-0411

St. Louis Metropolitan
G.R. Garrett, Executive V.P.
3839 Lindell Blvd.
St. Louis, MO 63108
(314) 371-5225

Saline Co. Medical Society
Van M. Robison, MD, Secretary
2303 S. Highway 65
Marshall, MO 65340
(816) 886-3364

SEMO Medical Society
Gordon Jones, MD, Secretary
1012 N. Main
Sikeston, MO 63801
(314) 471-0330

South Central Medical Society
Clara Applegate, MD, Secretary
P.O. Box 1100
West Plains, MO 65775

Tri-Lakes Medical Society
Brian Dieterle, MD
221 Skaggs, Ste. 201
Branson, MO 65616
(417) 334-0810

Webster Co. Medical Society
T. M. Macdonnell, MD, Secretary
Rt. #2, Box 65
Marshfield, MO 65706
(417) 859-2605

West Central Medical Society
John Torontow, MD, Secretary
Rt. # 2
Nevada, MO 64772
(417) 667-3438

Hospital Medical Staff Section
Charles Barbee, MD, Councilor
1701 E. Broadway, Suite 3
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Resident Physicians Section
Robert Swanson, MD
410 Ballwin Estates Ct.
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Medical Students Section
Dawn Kleindorfer, Councilor
6139 Pershing Ave., Apt. B
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(314) 725-7256

MSMA Membership
Jeff Howell
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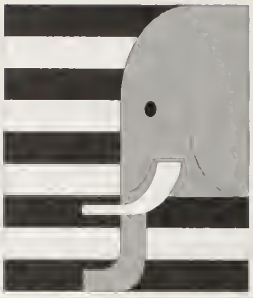
SuperPac Members 1995



Missouri Medical Political Action Committee (MMPAC) is the Missouri State Medical Association's bipartisan political action committee. The committee works with state elected officials to make sure they understand how every aspect of health system reform will affect the best interests of your patients.

MMPAC's goal is to organize the physician community into a powerful voice for quality health care in Missouri. The committee seeks to preserve the vital relationship between you and your patients by educating the medical community and our legislators about the problems of insurance-dominated markets, the urgent need for significant tort reform, and the importance of physician involvement in all health system reform debates.

MMPAC contributes 100% of your contributions to candidates who support the legislative goals of physicians. These candidates are selected based on recommendations from MMPAC members and local districts. Physicians and their spouses are encouraged to participate in the political process because their opinions carry a tremendous weight in any health care debate.

Annual Membership Dues:
$250 - SuperPAC Member
$100 - Sustaining Member
$50 - Active Member

Send your personal check payable to MMPAC to: P.O. Box 1402, Jefferson City, MO 65102.

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(both lists as of 7/25/95)

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Eugene F. White, *Rolla*
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American College of Physicians, Missouri Chapter
President: Coy Fitch, MD,
Contact: Mary Benoist
Dept. of Internal Medicine
1402 S. Grand Blvd.
St. Louis, MO 63104
Tel: (314)577-8762
Fax: (314) 268-5108

Missouri State Allergy Association
President: Mark Vandewalker, MD
Contact: Linda Bremer, Executive Director
113 Madison, P.O. Box 1028
Jefferson City, MO 65102
Tel (314)636-5151; Fax (314)636-8552

Greater Kansas City Allergy Association
President: Allen Kossoy, DO
901 Garfield, Topeka, KS 66606
Tel (913)354-9591

Missouri Society of Anesthesiologists
President: Richard Nelson, MD
Contact: Dennis Weiser, Executive Director
113 Madison, PO Box 1028
Jefferson City, MO 65102
Tel (314)636-6905; Fax (314)636-8552

Greater K.C. Society of Anesthesiologists
President: James D. Kindscher, MD
Contact: Margo Cook, Executive Secretary
St. Joseph's Health Center
Anesthesiology Department
1000 Carondelet Drive
Kansas City, MO 64114
Tel (816)943-2252

St. Louis Society of Anesthesiologists
President: Donald Arnold, MD
Contact: Lynne Williams, MD, Secretary
St. Louis University Medical Center
Department of Anesthesiology
3635 Vista Ave. at Grand
St. Louis, MO 63110
Tel (314)577-8750

Kansas City Southwest Clinical Society
President: Arthur A. Allen, II, MD
Contact: Linda F. Smutz, Executive Director
9225 Ward Parkway, Suite 114
Kansas City, MO 64114
Tel (816)523-3383

St. Louis Society of Colon & Rectal Surgeons
President: James W. Fleshman, MD
216 S. Kingshighway
St. Louis, MO 63110
Tel (314)454-7177; Fax (314)454-7177

Society of Critical Care Medicine, Missouri Chapter
President: Christopher Veremakis, MD
St. John's Mercy Medical Center
Department of Critical Care Medicine
621 S. New Ballas, Suite 5007B
St. Louis, MO 63141
Tel (314)569-6486

Crohn's & Colitis Foundation of America
President: Steven Kunz, MD
Contact: Carrie Evans, Executive Director
8900 State Line, Suite 354
Leawood, KS 66206
Tel (913)648-7738

Missouri Dermatological Society, Inc.
President: John D. DeSpain, MD
Contact: Dan H. Young
4400 Broadway
Kansas City, MO 64111

Kansas City Dermatologic Society
President: Glenn Goldstein, MD (until Sept. 1995)
6675 Holmes, Suite 350
Kansas City, MO 64131
Tel (816)276-7799; Fax (816)926-2281
Thelda Kestenbaum, MD (begins Oct. 1995)
Kansas University Medical Center
Dermatology Department
Kansas City, KS 66103
Tel (913)588-6028

St. Louis Dermatological Society
President: Robert E. Ziegler, MD
Contact: Jacquelyn B. Dilworth, MD, Vice President
11125 Dunn Road, Suite 206
St. Louis, MO 63136
Tel (314)355-7111; Fax (314)355-8604

St. Louis Ear, Nose and Throat Club
President: Alan Wild, MD
Contact: Stan Thawley, MD
605 Old Ballas, Suite 124
St. Louis, MO 63141
Tel (314)432-4110

American College of Emergency Physicians, Mo. Chapt
President: David Dabell, MD
Contact: Ron Ellison, Executive Director
113 Madison, PO Box 1028
Jefferson City, MO 65102
Tel (314)636-2144; Fax (314)636-8552

Emergency Physicians Foundation of Greater K. C.
President: Greg Minion, MD
Contact: Jayna Ross
Truman Medical Center, Dept. of Emerg. Med.
2301 Holmes
Kansas City, MO 64108
Tel (816)556-3127

Missouri Academy of Family Physicians
President: James D. Turner, MD
7 Oak Ridge Street
Washington, MO 63090
Contact: Jean Larson
8301 State Line, Suite 102
Kansas City, MO 64114
Tel (816)363-0322

Kansas City Academy of Family Practice
President: Scott Thompson, MD
Trinity Hospital, Dept. of Family Practice
Kansas City, MO 64108
Tel (816)751-5000

St. Louis Academy of Family Physicians
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4348 Loughborough Avenue
St. Louis, MO 63116
Tel (314)481-7030

St. Louis Gastrointestinal Endoscopy Society
President: Burton A. Schatz, MD
Contact: John Kelly, MD, Secretary-Treasurer
3009 N. Ballas, Suite 250
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Kansas City Gynecological Society
President: Brent E. Finley, MD
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St. Louis Gynecological Society
President: Ferdinand Del Pizzo, MD
1301 Boonslick Rd.
St. Charles, MO 63301
Tel (314)723-4143

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Contact: Patrick Mills, Executive Director
113 Madison, P.O. Box 1028
Jefferson City, MO 65102
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St. Louis Society of Internal Medicine
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Contact: Leon Robison, MD
222 S. Woods Mill Rd., Suite 750 N
Chesterfield, MO 63017
Tel (314)542-4854

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Kansas City, MO 64114
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University of Missouri-Columbia
1E65, Div. of Cardiology
1 Hospital Drive
Columbia, MO 65212
Tel (314)882-8448

Missouri State Neurological Society
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6400 Clayton Rd., Suite 405
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Tel (314)781-0024; Fax (314)781-6063
Contact: Jan Frank, Executive Director
111 B East Walnut
Columbia, MO 65203
Tel (314)874-8985; Fax (314)874-8986
Electronic Fax (314)449-0114

K.C. Neurological & Neurosurgery Society
President: Katherine A. Hedges, MD
6400 Prospect, Suite 316
Kansas City, MO 64132
Tel (816)822-7400
Contact: James Appelbaum, MD
21 N. 12th St.
Kansas City, KS 66102
Tel (913)621-0101

St. Louis Society for Neurological Sciences
President: Robert Dunn, MD
621 S. New Ballas Rd., Suite 268
St. Louis, MO 63141
Tel (314)569-6386

American College of OB-GYN (ACOG), Mo. Chapt.
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Springfield, MO 65807
Tel (417)882-6900

Great Plains College of Occup. & Enviro. Medicine
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St. Louis Society of Medical Oncology
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Missouri Ophthalmological Society, Inc.
President: Jean Ellis, MD
300 NW Mock Ave., Suite 200A
Blue Springs, MO 64014
Tel (816)228-2220

Kansas City Society of Ophthalmology & Otolaryngology
President: William A. Godfrey, MD
Contact: Metropolitan Medical Society of Greater K.C.
3036 Gillham Rd.
Kansas City, MO 64108
Tel (816)531-8432

St. Louis Ophthalmological Society
President: T. K. Krummenacher, MD
Contact: Tracy Bohnenkamp, Exec. Sec.
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St. Louis, MO 63110
Tel (314)367-1181

Missouri State Orthopaedic Association
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Jefferson City, MO 65102
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Kansas City Orthopaedic Society
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Kansas City, MO 64131
Tel (816)444-4664

St. Louis Orthopaedic Society
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6400 Clayton Rd., Suite 302
St. Louis, MO 63117
Tel (314)647-8562

Mo. Society of Otolaryngology - Head & Neck Surgery
President: Gregory J. Renner, MD
Dept. of Otolaryngology
MA 314, Health Sciences Center
Columbia, MO 65212
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Missouri Society of Pathologists
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Mid-Missouri Pathology Society
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KC Cytolab, 11237 Nall, #120
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St. Louis Pathological Society
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Vice Pres: Keith Fulling, MD
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Tel (314) 569-6120

American Academy of Pediatrics, Mo. Chapt.
President: Jerome A. Grunt, MD, PhD
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Greater Kansas City Pediatric Society
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Tel (816)531-8432

St. Louis Pediatric Society
President: Joseph Wayne, MD
224 S. Woods Mill, Suite 210
Chesterfield, MO 63017
Tel (314)579-9919

Central Society of Physical Medicine & Rehabilitation
President: Martin Wice, MD
615 S. New Ballas
St. Louis, MO 63141
Tel (314)569-6945
Contact: Thomas Lieb, MD, Secretary-Treasurer
6420 Clayton Rd.
Clayton, MO 63117
Tel (314)768-5318

St. Louis Society of Physical Medicine & Rehabilitation
President: Richard Katz, MD
St. Mary's Rehabilitation
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Clayton, MO 63117
Tel (314)768-5318

Mo. Association of Plastic & Reconstructive Surgery
President: William Huffaker, MD
222 S. Woods Mill Road, Suite 370-N
Chesterfield, MO 63017
Tel (314)434-6625

Plastic Surgery Society of Kansas City
President: Barbara McGrath, MD
Contact: Evelyn Lauber
7509 Nall Ave.
Prairie Village, KS 66208
Tel (913)381-5544

St. Louis Area Society of Plastic Surgery
President: Leroy Young, MD
Contact: Charles D. Ettelson, MD
222 S. Woods Mill Rd.
Chesterfield, MO 63017
Tel (314)878-7770

The Policystic Kidney Foundation
President: Mr. Dan Larson
Contact: Wendy Rueb, Program Coordinator
4901 Main St., Suite 320
Kansas City, MO 64112
Tel (816)931-2600, 1-800-PKD-CURE
Fax (816)931-8655

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Central Missouri Psychiatric Society
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Western Missouri Psychiatric Society
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Department of Radiology
Osage Beach, MO 65065

Greater Kansas City Radiological Society
President: Sidney Crawley, MD
North Kansas City Hospital
Department of Radiology
North Kansas City, MO 64116
Tel (816)691-1861

Greater St. Louis Society of Radiologists
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Contact: Jeffrey Thomasson, MD
St. John's Mercy
615 S. New Ballas
St. Louis, MO 63141
Tel (314)569-6000; Fax (314)569-6343

St. Louis Rheumatology Association
President: James Speiser, MD
Contact: Barbara A. Caciolo, MD, President-elect
6651 Chippewa, Suite 301
St. Louis, MO 63109
Tel (314)644-4411

American College of Surgeons, Missouri Chapter
President: Charles W. Van Way, MD
Medical Education Department
St. Luke's Hospital
44th & Wornall Road
Kansas City, MO 64111
Tel (816)932-3577
Contact: Linda Wheelen
P.O. Box 4562
St. Louis, MO 63110
Springfield, MO 65808
Tel (417)869-5222; Fax (417)887-9353

Missouri State Surgical Society
President: Michael Bukstein, MD
711 Grand
Hannibal, MO 63401
Contact: Ron Ellison
113 Madison, P.O. Box 1028
Jefferson City, MO 65102
Tel (314)636-5151; Fax (314)636-8552

Kansas City Surgical Society
President: Ronald J. Sharp, MD
(Herman Watson, MD - begins Jan. 1, 1996)
2401 Gillham Road
Kansas City, MO 64108
Tel (816)234-3578; Fax (816)234-3821
Contact: 24th & Gillham Rd.
Kansas City, MO 64108
Tel (816)234-3893; Fax (816)234-3821

St. Louis Surgical Society
President: Gregorio A. Sicard, MD
1 Barnes Hospital #5103
St. Louis, MO 63110
Tel (314)362-7841
William F. Sasser, MD (1996 President)
621 S. New Ballas, #542-A
St. Louis, MO 63141
Tel (314)567-1841
Secretary: Thomas Blanke, MD
621 S. New Ballas, Suite 598-C
St. Louis, MO 63141
Tel (314)569-6655

Missouri Thoracic Society
President: Garth Harrison, MD
Contact: Dennis R. Pyszynski, MD
UMKC, 2411 Holmes St.
Kansas City, MO 63108
Tel (816)235-1978; Fax (816)235-5194

Missouri Urologic Society
President: Micheal J. Chehval, MD
621 S. New Ballas Rd. #6002
St. Louis, MO 63141
Tel (314)991-2626

Kansas City Urological Society
President: Gary Leifer, MD
6650 Troost, Suite 206
Kansas City, MO 63128
(816)333-0500

St. Louis Urological Society
President: Paul Langloys, MD
Contact: 9911 Kennerly Rd., Suite C
St. Louis, MO 63128
Tel (314)843-5500

St. Louis Vascular Society
President: Gregorio Sicard, MD
Contact: Pat McMullin
621 S. New Ballas, Suite 6005, Tower B
St. Louis, MO 63141
Tel (314)569-4200

HMO

MEDICAL DIRECTOR

Community Health Plan is a non-profit community owned HMO, being developed throughout Northwest MO. We currently seek a half-time Medical Director. If you can continue to practice half-time and have managed care administrative background (prefer HMO management experience), you should consider Community Health Plan in St. Joseph, MO. Use your extensive communication, leadership, and clinical skills. This position is responsible for the day-to-day clinical review activities of the Plan, medical care delivery model development, chairing several physician committees, and assisting our providers in our communities with education and support for our managed care activities.

Send resume to **Community Health Plan, 5301 Faraon, St. Joseph, MO 64506, Attn: Joan Copeland or call 800-990-9247.**

Heartland
Health System

EOE

The Nation's Largest Multispecialty Meeting Is Coming to Missouri!

NOVEMBER 15-19, 1995
KANSAS CITY CONVENTION CENTER - BARTLE HALL

HERI • HODIE • CRAS
• SEMPER • MEDICA • EXCELLENTIA •
• 1 • 9 • 9 • 5 •
SOUTHERN MEDICAL ASSOCIATION
Yesterday • Today • Tomorrow • Always Medical Excellence
89TH ANNUAL SCIENTIFIC ASSEMBLY
KANSAS CITY, MO
NOVEMBER 15-19, 1995

Mark your calendar to attend Southern Medical Association's 89th Annual Scientific Assembly this November as we plan to bring our unique educational opportunities to the great "Show Me" State. The meeting will offer a wide variety of specialty and primary care programs, and SMA's 27 sections will meet featuring guest lecturers and paper presentations. Many programs offer CME Credit (physicians could receive 30 hours at last year's meeting) as SMA offers some of the most cost-effective CME credit around!

SMA's meeting can be fun for your entire family with a host of social, enrichment, and sightseeing activities! (SMA's famous President's Night Dinner Dance will feature a tribute to Andrew Lloyd Webber and our favorite dancing band, the Pink Flamingos!)

For more information or to register, call the toll-free number below. All pre-registrants will receive a comprehensive copy of the meeting program in early May. SMA is going to show Missouri a great medical meeting!

MEDICAL EXCELLENCE

SOUTHERN MEDICAL ASSOCIATION

TO REGISTER, COMPLETE & RETURN THE FORM BELOW, OR CALL: (800) 423-4992

EARLY BIRD DEADLINE: JUNE 1, 1995

Name (Please Print or Type) ____________
Address ____________
City ____________ State ______ Zip ______
Specialty ____________ Date of Birth __/__/__
Medical School where M.D. degree was received ____________

( ) ____________ Home Telephone Number
( ) ____________ Office Telephone Number
Name for Spouse/Companion Badge (if attending) ____________
Home Address ____________
City ____________ State ______
Name of Hospital where Residency Training took place ____________

SMA Membership No. ____________

Please check the appropriate space(s) below:

☐ SMA Member– **Waived**
☐ PHYSICIAN-Non-Member– **$225** Registration Fee
☐ SMA Membership/Registration Fee– **$100** (Join Now & Save $125 on Meeting Registration Fee).
☐ Spouse/Companion-**Waived**
☐ Student/Resident– **NO FEE**
☐ Nurse/Technician– **$75**
☐ Physician Assistant– **$75**
☐ Ph.D.– **$100**
☐ Staff Fee - $25

☐ Charge: (circle) MasterCard/VISA/Discover ____________
Exp. Date ____________ Signature ____________
☐ Check: Make payable to: SOUTHERN MEDICAL ASSOCIATION (Return check with this form).

Southern Medical Association, 35 Lakeshore Drive, P.O. Box 190088, Birmingham, Alabama 35219-0088
(800) 423-4992 or FAX Your Registration to (205) 942-0642

SMA29SANM372 MOMEDAM

State Map of District & Component Society Boundaries

District 1

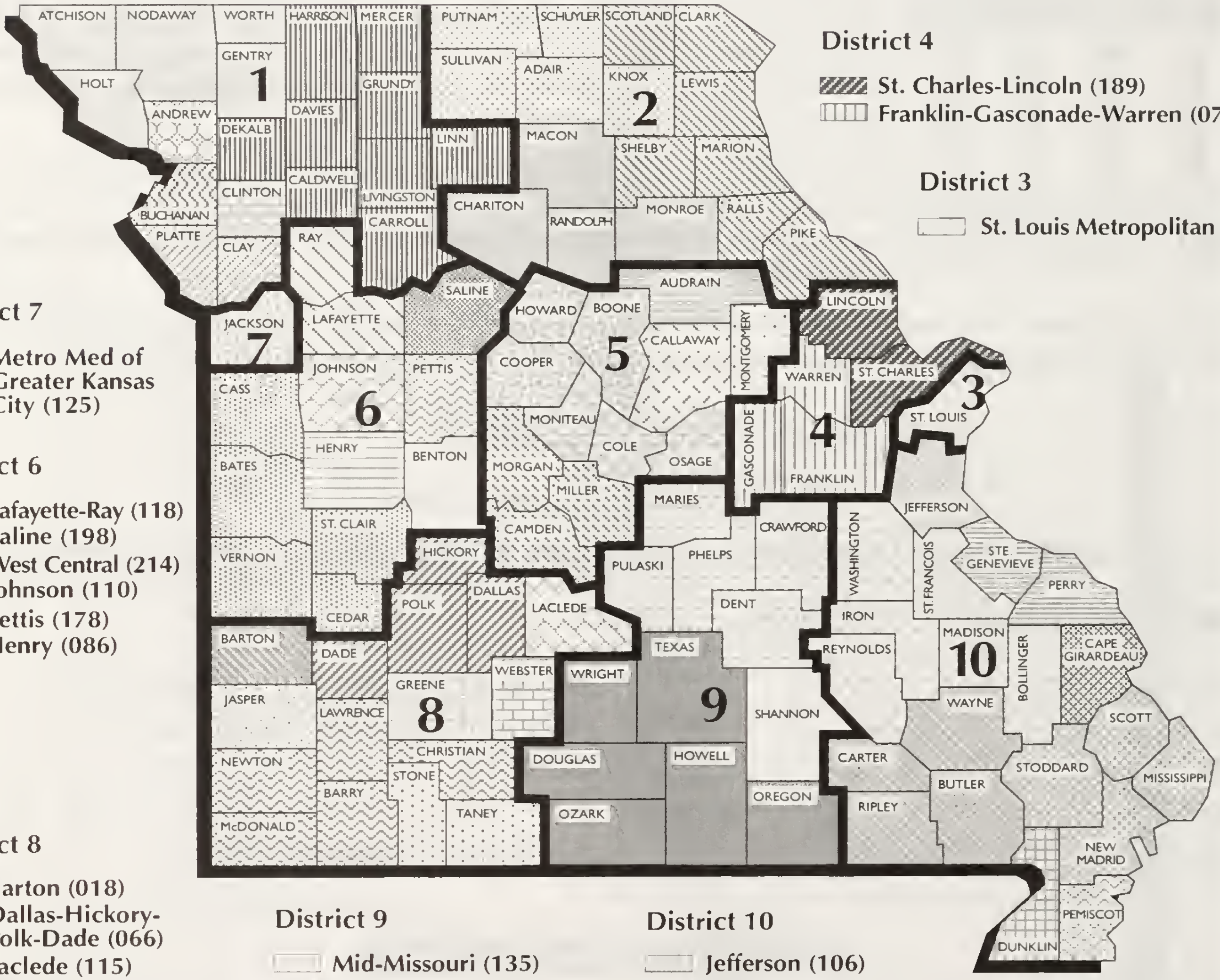
- ▨ Andrew (010)
- □ Northwest (158)
- ▥ Grand River (078)
- ▨ Buchanan (026)
- ▤ Clinton (054)
- ▨ Clay-Platte (050)

District 2

- ░ North Central (148)
- ▨ Northeast (150)
- ▩ Chariton-Macon-Monroe-Randolph (046)

District 5

- ▤ Audrain (014)
- □ Boone (Howard, Cooper) (026)
- ▨ Callaway (038)
- □ Montgomery (146)
- ░ Cole (Moniteau, Osage) (058)
- ▨ Lake of the Ozarks (120)


ATCHISON
NODAWAY
WORTH
HARRISON
MERCER
PUTNAM
SCHUYLER
SCOTLAND
CLARK
GENTRY
1
SULLIVAN
ADAIR
KNOX
LEWIS
2
HOLT
ANDREW
GRUNDY
DAVIES
DEKALB
LINN
MACON
SHELBY
MARION
CLINTON
CALDWELL
LIVINGSTON
BUCHANAN
CHARITON
CARROLL
RANDOLPH
MONROE
RALLS
PLATTE
CLAY
RAY
PIKE
SALINE
AUDRAIN
LINCOLN
JACKSON
7
LAFAYETTE
HOWARD
BOONE
MONTGOMERY
CALLAWAY
5
COOPER
JOHNSON
PETTIS
WARREN
ST. CHARLES
3
ST. LOUIS
CASS
6
MONITEAU
COLE
OSAGE
GASCONADE
4
HENRY
BENTON
BATES
MORGAN
MILLER
FRANKLIN
MARIES
ST. CLAIR
CAMDEN
CRAWFORD
JEFFERSON
WASHINGTON
VERNON
HICKORY
PULASKI
PHELPS
ST. FRANCOIS
STE. GENEVIEVE
PERRY
DALLAS
POLK
LACLEDE
DENT
CEDAR
IRON
BARTON
DADE
TEXAS
REYNOLDS
MADISON
10
BOLLINGER
CAPE GIRARDEAU
WEBSTER
WRIGHT
JASPER
GREENE
9
LAWRENCE
8
SHANNON
WAYNE
SCOTT
CHRISTIAN
NEWTON
STONE
DOUGLAS
HOWELL
CARTER
STODDARD
MISSISSIPPI
BARRY
BUTLER
TANEY
OZARK
OREGON
RIPLEY
McDONALD
NEW MADRID
PEMISCOT
DUNKLIN

District 4

- ▨ St. Charles-Lincoln (189)
- ▥ Franklin-Gasconade-Warren (074)

District 3

- □ St. Louis Metropolitan (190

District 7

- ░ Metro Med of Greater Kansas City (125)

District 6

- ▨ Lafayette-Ray (118)
- ▩ Saline (198)
- ░ West Central (214)
- ▨ Johnson (110)
- ▨ Pettis (178)
- ▤ Henry (086)

District 8

- ▨ Barton (018)
- ▨ Dallas-Hickory-Polk-Dade (066)
- ▨ Laclede (115)
- ░ Jasper (102)
- ▨ Ozarks (166)
- □ Greene (082)
- ▦ Webster (210)
- ░ Tri-Lakes (208)

District 9

- □ Mid-Missouri (135)
- ▩ South Central (206)

District 10

- □ Jefferson (106)
- □ Mineral Area (138)
- ▤ Perry-Ste. Genevieve (174)
- ▩ Cape Girardeau Area (042)
- ▨ Butler-Wayne-Ripley-Carter (034)
- ░ SEMO (202)
- ▦ Dunklin (070)
- ░ Pemiscot (170)

DISTRICT #1

Organized Medical Societies:

Andrew (010), Buchanan (030), Clinton (054), Northwest (158), Grand River (078), Clay-Platte (050)

Counties in District:

Andrew
Atchison
Buchanan
Caldwell
Carroll
Clay
Clinton
Davies
DeKalb
Gentry
Harrison
Grundy
Holt
Linn
Livingston
Mercer
Nodaway
Platte
Worth

DISTRICT #2

Organized Medical Societies:

Chariton-Macon-Monroe-Randolph (046)
North Central (148) Northeast (150)

Counties in District:

Adair
Chariton
Clark
Knox
Macon
Marion
Monroe
Lewis
Pike
Putnam
Ralls
Randolph
Schuyler
Scotland
Shelby
Sullivan

DISTRICT #3

Organized Medical Society: St. Louis Metropolitan (190)

Areas in District: St. Louis City & St. Louis County

DISTRICT #4

Organized Medical Societies:

Franklin-Gasconade-Warren (074)
St. Charles-Lincoln (189)

Counties in District

Franklin
Gasconade
Lincoln
Warren
St. Charles

DISTRICT #5

Organized Medical Societies:

Audrain (014), Boone (026) Callaway (038), Cole (058), Lake of the Ozarks (120), Montgomery (146)

Counties in District:

Audrain
Boone
Callaway
Camden
Cole
Cooper
Howard
Miller
Moniteau
Montgomery
Morgan
Osage

DISTRICT #6

Organized Medical Societies:

Henry (086), Johnson (110), Lafayette-Ray (118), Pettis (178), Saline (198), West Central (214)

Counties in District:

Bates
Benton
Cass
Cedar
Henry
Johnson
Lafayette
Pettis
Saline
Ray
St. Clair
Vernon

DISTRICT #7

Organized Medical Society:

Metro Med Society of Greater Kansas City (125)

Areas in District: Kansas City & Jackson County

DISTRICT #8

Organized Medical Societies:

Barton (018), Dallas-Hickory-Polk-Dade (066)
Greene (082), Jasper (102), Laclede (115), Ozarks (166)
Tri-Lakes (208), Webster (210)

Counties in District:

Barry
Barton
Christian
Dade
Dallas
Greene
Hickory
Jasper
Lawrence
Laclede
McDonald
Newton
Polk
Stone
Taney
Webster

DISTRICT #9

Organized Medical Societies:

Mid-Missouri (135), South Central (206)

Counties in District:

Crawford
Dent
Douglas
Howell
Maries
Oregon
Ozark
Phelps
Pulaski
Shannon
Texas
Wright

DISTRICT #10

Organized Medical Societies:

Butler-Wayne-Ripley-Carter (034), Cape Girardeau (042)
Dunklin (070), Jefferson (106), Mineral Area (138),
Pemiscot (170), Perry-Ste. Genevieve (174), SEMO (202)

Counties in District:

Bollinger
Butler
Cape Girardeau
Carter
Dunklin
Iron
Jefferson
Madison
Mississippi
New Madrid
Pemiscot
Perry
Reynolds
Ripley
St. Francois
Ste. Genevieve
Scott
Stoddard
Washington
Wayne

Doc to Doc

How do we make MSMA - the voice of the profession of medicine stronger?

As Missouri's most visible state association, it is imperative that the MSMA continue growing a strong, politically-active, professionally-motivated membership. As in all professional associations, our best sales pitch is membership word-of-mouth. If you know of any colleagues whose names do not appear in this directory, please inform them of the benefits of MSMA membership. Continuing growth in membership reflects physicians' belief that advocacy on their behalf, at the 'grassroots' level of government, is critical in time of rapid change in the health care delivery system. The MSMA serves as the voice of Missouri's physicians; an association is only as strong as its members.

Members of the Missouri State Medical Association are listed in three rosters - alphabetical, by medical specialty and by component medical society.

The Alphabetical Roster includes the city in which the physician practices, and the code number for component medical society membership. This roster includes all MSMA membership categories except student members.

The Medical Specialty Roster lists actively practicing MSMA members alphabetically by primary medical specialty. The listing includes the physician's city and component medical society code.

The Component Society Roster lists all MSMA members by their component medical societies. This listing includes addresses, available phone numbers and the medical specialty code.

Medical Specialty Codes are located on page 446, prior to the specialty roster.

A map of component medical society boundaries is located on page 406.

Changes of address, phone number, or medical specialty should be reported to Barbara Crader at MSMA, Tel: (314) 636-5151; Fax: (314) 636-8552.

Component Medical Society Codes

002	MSMA Only
010	Andrew
014	Audrain
018	Barton
026	Boone
030	Buchanan
034	Butler-Wayne-Ripley-Carter
038	Callaway
042	Cape Girardeau
046	Chariton-Macon-Monroe-Randolph
050	Clay-Platte
054	Clinton
058	Cole
066	Dallas-Hickory-Polk-Dade
070	Dunklin
074	Franklin-Gasconade-Warren
078	Grand River
082	Greene
086	Henry
102	Jasper
106	Jefferson
110	Johnson
115	Laclede
118	Lafayette-Ray
120	Lake of the Ozarks
125	Metropolitan Medical Society of Greater Kansas City
135	Mid-Missouri
138	Mineral Area
146	Montgomery
148	North Central
150	Northeast
158	Northwest
166	Ozarks
170	Pemiscot
174	Perry-Ste. Genevieve
178	Pettis
189	St. Charles-Lincoln
190	St. Louis Metropolitan
198	Saline
202	SEMO
206	South Central
208	Tri-Lakes
210	Webster
214	West Central
215	Resident Physician Section
216	St. Louis University
218	University of Missouri - Columbia
220	University of Missouri - Kansas City
222	Washington University

Alphabetical Roster of Members

(Including name of city and code number of each member's component medical society.)

A

Abada, Rolando	St. Louis	190
Abadir, Rushdy	Columbia	026
***Abbadessa, Steven M**	St. Louis	190
Abbey, Elliot E	St. Louis	002
Abbott, David A	St. Louis	190
Abdou, Nancy L	Kansas City	125
Abel, Charles C	St. Louis	190
Abele, William A	Boonville	026
Abella, Ben Zuluet	Belton	125
Abend, Melvin N	Kansas City	125
Abercrombie, Keith J	Kansas City	125
Abernathie, Dennis L	Columbia	026
Abinoja, Conrado B	St. Louis	190
Abodeely, Daniel A	St. Louis	190
Abrams, Bernard M	Kansas City	125
Abu Dal, Ziad	St. Louis	190
Accardo, Pasquale J	St. Louis	190
Aceto, Thomas, Jr.	St. Louis	190
Acuff, R. Phillip	St. Joseph	030
Adams, Allen G	St. Louis	190
Adams, Dawn	Independence	126
Adams, Mark A	Columbia	026
Adams, Riley R	Cape Girardeau	042
Adams, Robert B	Joplin	102
Adams, Susan E	St. Louis	190
Adelman, Arthur	Shawnee Mission, KS	125
Adelmann, Eugene	St. Louis	190
Adkins, Charlene	Columbia	026
***Adkison, Brian W**	Seymour	082
Adler, Benard C	St. Louis	190
Adler, Federico	Kansas City	125
Adler, Lisa M	St. Louis	195
Aeder, Mark I	Kansas City	125
Aff-Drum, Helen	St. Louis	190
Afuwape, Emanuel A	E. St. Louis, IL	190
Agolia, Randy	Fenton	195
Aguinaldo, Jaime A	St. Louis	190
Ahadi, Abd U	St. Louis	190
Ahern, Archibald M	St. Louis	190
Ahlering, Christopher L	St. Louis	190
Ahlering, George P	St. Louis	190
Ahlering, George H	St. Louis	190
Ahlum, Sandra J	Hannibal	150
Ahlvin, Robert C	Sikeston	202
Ahmad, Aqeeb	St. Louis	190
Ahmad, Bashir	Pacific	190
Ahmad, Naseer	St. Louis	190
Ahmad, Nusrat J	Ballwin	190
Ahmann, Thomas M	Mexico	014
Ahnemann, Janet L	Clinton	086
Ahuja, Suraj P	Kansas City	125
Aiken, Richard C	Washington	074
Ailor, Edgar I	Columbia	026
Ailor, Susan K	Columbia	026
Aitken, Louis F	St. Louis	190
Ajans, Zaki A	Mexico	014
Akin, C. David	Independence	125
Akremi, Janet E	Warrensburg	110
Al-Aly, Robert M	Ballwin	190
Al-Shathir, Saad	Joplin	102
Albani, Frank J	Liberty	050
Albanna, Faisal J	St. Louis	190
Albano, Benjamin I	Crystal City	106
Albano, Grace A	Independence	125
Albera, Victor H	St. Clair	190
Alberg, Marvin R	Kansas City	125
Albert, I. Renee	St. Louis	190
***Albracht, Bryan J**	Kansas City	126
Albritton, Michael A	Springfield	082
Albus, Thomas E	Bridgeton	190
Alcancia, Elpidio Y	Springfield	082
Alderman, Lillian C	Liberty	050
Aldridge, George A	Poplar Bluff	034
Alegre, Jorge M	Chesterfield	190
Aleksander, Bernardo G	El Paso, TX	190
Alex, Morris	St. Louis	190
Alfie, Salomon	Shawnee Mission, KS	125
Ali, Syed S	Granite City, IL	190
Allain, James J	Shawnee Mission, KS	050
Allan, James E	Jefferson City	058
Allan, James R	Columbia	026
Allcorn, Donald K	Lincoln	178
Allen, Brent T	St. Louis	190
Allen, David O	Bella Vista, AR	102
Allen, James H	St. Louis	190
Allen, Jerry H	Springfield	082
Allen, Jerry H	Washington	074
Allen, Mark J	Kansas City	125
Allen, Melvin A	St. Louis	190
Allen, Robert E	Shawnee Mission, KS	125
Allen, Thomas P	Overland Park, KS	125
Allen, William Corwin	Columbia	026
Allen, William C	Columbia	026
Allison, James B	Springfield	082
Allphin, Allan L	Springfield	082
Almiron, Osias A	House Springs	190
Almuttar, Wasif F	Maryville	158
Alonso, J. Mario, Jr.	St. Louis	190
Alonso-Yague, Pascual	Florissant	190
Alsop, Webb S, Jr.	Shawnee Mission, KS	125
Altemeier, William A, III	Columbia	026
Altepeter, H. Martin	St. Louis	190
Alvarez, Ulises C	Florissant	190
Alyea, James O	Columbia	026
Ames, Mary B	St. Joseph	125
Amin, Navin J	St. Louis	190
Amini, Jafar	Shawnee Mission, KS	125
Amjad, Mohammad T	St. Louis	190
Ammala, Edward D	Rolla	135
Ammatelli, Francis J	Kansas City	125
Anandarajah, Rajamanikkam	Chesterfield	195
Anbari, Martin M	Brentwood	195
Ancheta, Apolinario A	Springfield	082
Anderson, Charles B	St. Louis	190
Anderson, D. Claire	St. Louis	190
Anderson, Daphne W	Springfield	082
Anderson, David J	St. Louis	190
Anderson, Douglas A	Springfield	082
Anderson, Frank K	St. Charles	189
Anderson, Paul B	Neosho	166
Anderson, Philip C	Columbia	026
Anderson, Raymond B	Shawnee Mission, KS	125
Anderson, Susan	Kansas City	126
Anderson, Thomas R	Columbia	026
Andres, Edward H	St. Joseph	030
Andrew, Christopher R	Joplin	102
Andrews, Elizabeth J	Springfield	082
***Andrews, Lynthia B**	Kansas City	030
Andrews, Paul E	Springfield	082
Andrus, Bailey C	Leawood, KS	125
Andrus, Charles H	St. Louis	190
Anglen, Jeffrey O	Columbia	026
Anglo, Luis J	St. Louis	027
Anglo, Luis B	St. Louis	190
Anslinger, David L	Chesterfield	190
Anstey, George C	St. Ann	190
Anstey, John T	St. Ann	190

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*Doctor of Osteopathy

Anthony, Dallas D Springfield	082
Anthony, James P Kansas City	125
Apostol, Andres G Monett	166
Appelbaum, John K St. Louis	002
Applegate, Clara West Plains	206
Applewhite, Thomas A St. Louis	190
Apprill, Phillip G St. Louis	190
Apte, Sunil M Washington	074
Arbab, Ali A Kansas City	125
Archer, Carol R St. Louis	002
Ardelt, Agnieszka A St. Louis	195
Arends, Todd W Chesterfield	190
Arenos, Proceso T St. Louis	190
Arias, Fernando St. Louis	190
Arkin, Steven M Kansas City	125
Armbruster, A. A. Stilwell, KS	002
Armstrong, Jay H N. Kansas City	050
Armstrong, Stephen D Springfield	082
Arneson, Axel N St. Louis	190
Arney, William G St. Louis	190
Arnold, Donald E St. Louis	190
Arnold, John D Shawnee Mission, KS	125
Arnold, Kenneth J Chesterfield	190
Arnold, Paul N Springfield	082
Aronberg, Jerome M St. Louis	190
Arora, Ravinder S Sedalia	178
Arribas, Neva P St. Louis	190
Arst, Herbert E Kansas City	050
Arthaud, J. B. Columbia	026
Arthur, Gerald L Columbia	026
Asaro, Phillip V St. Louis	190
Asbury, Dale W Jackson	042
Asel, Norman D Columbia	026
Ash, Charles J Springfield	082
Ashby, Jennifer D N. Kansas City	125
Ashcraft, Keith W Overland Park, KS	125
Asher, Irving M Columbia	026
***Asher, Kennett D** Jackson	042
Ashkenasi, Arie Springfield	082
Ashley, Lillard G, Jr. Kansas City	125
Ashley, Michael E Springfield	082
Ashley, Thomas E Springfield	082
Askew, John H Sikeston	202
Aspinwall, Eric Kansas City	126
Assi, Nizar A St. Louis	190
Assil, Kerry K St. Louis	190
Atwell, Floyd C Shawnee Mission, KS	125
Aubuchon, Craig E St. Louis	190
Auclair, Ronald J St. Louis	190
Auer, Arthur I St. Louis	190
Aufderheide, G. Russell St. Louis	190
Augustin, Cesar St. Louis	190
Aulenbacher, Carl E Ft. Lauderdale, FL	074
Auner, J. David Ironton	138
Austin, George M Blue Springs	125
Avallone, Anthony N Springfield	082
Averill, Keith H Mission Hills, KS	125
Avins, Laurence R St. Louis	190
Avioli, Louis V St. Louis	190
***Awad, Ahmed M** Kansas City	126
Awadalla, Sylvia St. Louis	190
Axness, Mark E Springfield	082
Ayata, Sedat M St. Louis	190
Aydt, Sarah A Cape Girardeau	042
Aylward, Howard J, Sr. Santa Barbara, CA	190
Ayvazian, Vatche H St. Louis	190
Azan, Kenneth N Sedalia	178
Azzam, Farid J St. Louis	190

B

***Baade, Norman F** St. Joseph	030
Babka, Joseph J St. Louis	190
Bach, Lysle M Hannibal	150
Back, Donald K Springfield	082
Backer, Matt H, Jr. San Diego, CA	190
Backer, Robert J St. Louis	190
Backstrom, Jay T Kansas City	125
***Bader, Larry W** Columbia	026
Bagby, Jack M, Jr. Springfield	082
Baglan, Robert J St. Louis	190
Bagwe, Lata R St. Louis	190
Bahn, Charles F Prescott, AZ	042
Bai, Samuel S Festus	106
Baig, Mukarram A Chesterfield	195
Bailey, Alan H Springfield	082
Bailey, Colin E Columbia	026
Bailey, Gregory J St. Louis	190
Bailey, Hugh R Kansas City	002
Bailey, Sean B St. Louis	195
Bailey, Steven C Cape Girardeau	042
Bailiff, Robert Springfield	082
Baird, Keim L St. Charles	189
Baker, Carl N St. Louis	190
Baker, Donald L Union	074
Baker, Eric K Independence	126
Baker, John H St. Louis	190
Baker, Josephine D Moberly	046
Baker, Marion H Liberty	126
Baker, Philip J Independence	125
Baker, Sherwood Columbia	026
Baker, Tim E Washington	074
Bal, Deepinder S Lenexa, KS	126
Balakrishnan, Roja Rolla	135
Balcer, Charlotte M Jefferson City	058
***Balcer, Conrad S** Jefferson City	058
Baldwin, Richard M Springfield	082
Baldwin, Richard, Jr. St. Louis	190
Baldwin, Theodore R Excelsior Springs	118
Bale, Robert D St. Louis	190
Balfe, Dennis M St. Louis	190
Ball, David A Joplin	102
Ballard, V. Bryce Shawnee Mission, KS	125
Ballinger, Walter F St. Louis	190
Balster, Vernon H St. Louis	190
Bandle, Donald F St. Louis	190
Banerjee, Dilip Washington	074
Banez, Colita R St. Louis	190
Banton, M. Roman St. Louis	190
Banton, Thomas J, Jr. Florissant	190
Banton, William C, II St. Louis	190
Barbe, David O Mountain Grove	206
Barbee, Charles W Columbia	026
Barbieri, Craig D Kansas City	126
Barbour, Marvin R Poplar Bluff	034
Bardsley, John L St. Louis	190
Bare, Chester I, Jr. Kansas City	125
Bare, Edward F Tarkio	158
Bareis, Robert J Marshfield	210
Barelli, Pat A Leawood, KS	125
Bari, Wagih A St. Louis	190
Barjenbruch, Peggy W Mexico	014
Barker, Edward T St. Louis	190
Barloon, James H Kansas City	125
Barlow, Val Joh Chesterfield	190
Barnard, John L, Jr. Kansas City	125
Barnes, Charles H Kansas City	125
Barnes, Larry G Neosho	166
Barnes, Richard E Hannibal	150
Barnett, Floyd A Paris	046
Barnhill, Floyd R Springfield	082
Barnthouse, Cris D Kansas City	125
Barnthouse, Joseph R Kansas City	125
Barone, Constance M Columbia	026
Barr, Glenn A Kansas City	125
Barr, W. Kent N. Kansas City	125
Barragan, Hector D St. Louis	190
Barrett, Scott R, Sr. Columbia, MD	190
Barrow, Jack St. Louis	190
Barry, William B Kansas City	125
Bart, Gerald N St. Louis	190
Bartell, Michael F St. Louis	190

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*Doctor of Osteopathy

Barter, Bruce	Kansas City	125
Bartlett, Hugh C	Rolla	135
Bartlett, John E	Springfield	082
Bartley, Richard L	Springfield	082
Barton, Premsri T	St. Louis	190
***Bartow, John H**	St. Joseph	030
Bartulica, Nicholas	St. Joseph	030
Bashyakarla, Rajeeva K	Joplin	102
Baskurt, Mehmet V	Poplar Bluff	034
Bass, Barry J	Rolla	135
Bass, Walter R	Raytown	125
Bassman, Donald R	St. Louis	190
Batan-Co, Ruby L	Chesterfield	190
Bateman, Timothy M	Kansas City	125
Bates, G. Comer	Kansas City	050
Batterson, James R, Jr.	Kansas City	125
Batts, Barbara A	Kansas City	125
Batty, Thomas V	Eldorado Springs	214
Baudendistel, Lawrence J	St. Louis	190
Bauer, Daniel J	St. Louis	190
Bauer, John D	St. Louis	190
Bauer, Lafe W	Overland Park, KS	125
Bauer, Martin L	Prairie Village, KS	125
Baula, Armindo G	St. Louis	190
Bauman, Alan E	Kansas City	125
Baumann, Albert R	Steelville	135
Baumann, Daniel J	St. Louis	190
Baumer, Kevin A	Belleville, IL	195
Bauschard, Frederick D	St. Louis	190
Bautista, Joel O	Moberly	046
Bautista, Rogelio L	Moberly	046
Bauwens, Daniel B	Chesterfield	190
Bayer, William L	Kansas City	125
Beal, Catherine E	St. Louis	190
Beall, McPherson S, Jr.	Kansas City	125
Beare, Lucia V	St. Louis	190
Beasey, Matthew D	Kansas City	126
Beato, David L	St. Louis	190
Beatty, Robert M	Kansas City, KS	125
Beaty, William R	St. Ann	190
Beck, John R, Jr.	St. Louis	195
Beck, Marcus R	Columbia	026
Beck, Paul M	St. Joseph	030
Becker, Bernard	St. Louis	190
Becker, Robert L	St. Louis	190
Becker, Rolfe A	Kansas City	125
Becker, Stanley C	St. Louis	190
Becker, William L	St. Louis	190
Beckett, William Wilson	Columbia	026
Beckette, Edmund	St. Louis	190
Beckman, Robert F	St. Louis	002
Bedwinek, John M	St. Charles	190
Beeks, John W	Kansas City	125
Beesley, Kari	Kansas City	002
Beggs, Charles W	Liberty	050
Behbahani, Parviz M	Bridgeton	190
Beheler, Edward M	St. Joseph	030
Behm, Laurie	Joplin	102
Behrends, Steven H	Kansas City	125
Behrens, Donald T	St. Louis	190
Behrens, Gerald L	St. Louis	190
Beitman, Bernard D	Columbia	026
Belden, Jeffery L	Columbia	026
Belen, Marietta	Festus	106
Belew, Joe E	Chesterfield	190
Belew, Mark	Florissant	190
Bell, Laird A	Springfield	082
Bell, Malinda H	Shawnee Mission, KS	125
Bell, Martin J	St. Louis	190
Bell, Stephen	St. Louis	190
Bell, William F	Lee's Summit	125
Beller, Thomas A	Kansas City	125
Belshe, Sidney B	Jefferson City	058
***Belson, Ian L**	Kansas City	125
Benage, Clarence M	St. Louis	190
Bender, Walter L	Kansas City	125
Benecke, James E, Jr.	St. Louis	190
Benedett, Robert E	Springfield	082
Benedict, William W	Chesterfield	190
Benitez, Jose A	St. Louis	190
Bennett, Danny L	Kansas City	125
Bennett, Donald R	Columbia	027
Bennett, James D	Leawood, KS	125
Bennett, John E	Jefferson City	058
Bennett, Kenneth J	St. Louis	190
Benoist, Walter F	Chesterfield	190
Benson, Larry E	N. Kansas City	050
Benson, Ronald G	Springfield	082
Benson, Russell L	Kansas City	125
Benson, William F	Kansas City	125
Bentlage, Charles H	Joplin	102
Bentley, John D	Springfield	082
Benton, Mary Beth	Columbia	026
Berdy, Gregg J	St. Louis	190
Berdy, Susan S	St. Louis	190
Berg, Edward F	Chesterfield	190
Berg, Leonard	St. Louis	190
Berg, Ralph	St. Louis	190
Bergen, Brent D	St. Louis	195
Bergmann, Daniel J	St. Peters	189
Bergner, Grace E	St. Louis	190
Berkowitz, Ellis R	St. Joseph	030
Berkowitz, Wallace P	St. Louis	190
Berland, David I	Chesterfield	190
Berland, Harry I	St. Louis	190
Berman, Paul M	St. Louis	190
Berman, William	St. Louis	190
Bernabe, Florinio H	St. Louis	190
Bernabe, Ofelia M	St. Louis	190
Bernard, Jennifer P	Overland Park, KS	126
Bernard, Lisa	Kansas City	125
Bernardi, Robert J	St. Louis	190
Berndsen, Gerard H	St. Louis	190
Berner, Carol T	Springfield	082
Bernhardson, Paul D	Columbia	026
Bernhardt, Gary D	Lenexa, KS	125
Bernhardt, Mark	Kansas City	125
Berni, Anthony A	St. Louis	190
Bernstein, Aaron M	St. Louis	190
Berry, Danny T	Cape Girardeau	042
Berry, Maxwell G	Shawnee Mission, KS	125
Berry, Paul T	Springfield	082
Berson, Douglas R	Chesterfield	002
Berwald, David M	Bridgeton	190
Berwald, Irvin I	Bridgeton	190
Bessonny, Eric J	St. Louis	190
Best, John F	Springfield	082
Best, John A	Chesterfield	190
Bettinger, Irene E	Kansas City	125
Bettonville, Peter V	St. Louis	190
Betz, Richard J	Neosho	166
Betz, Robert F	Neosho	166
***Betz, William T**	Grandview	125
Bever, Grant A	St. Louis	190
Bhattacharjee, Lakshmisri	Kansas City, KS	126
Bhattacharya, Arjun	St. Louis	190
Bhothinard, Bhisit	Poplar Bluff	034
Bhuyan, Mahendra	St. Louis	190
Bialecki, Leon	St. Louis	190
Biber, Robert J	Independence	125
Bickel, Vern T	Lamar	018
Bickley, James E	Evergreen, CO	125
Biel, Stanley I	Bridgeton	190
Bieniek, Christopher M	Hannibal	150
Biery, Richard M	Kansas City	125
***Bieser, R. Dan**	Cape Girardeau	042
Bigg, Steven W	St. Louis	190
Biggs, Alfred D, Jr.	Kansas City	125
Biggs, Fred J	Poplar Bluff	034
Biggs, Harry L	Galena	125
Biggs, John	St. Louis	190
Billadello, Joseph J	St. Louis	002

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*Doctor of Osteopathy

Billy, Lawrence J	**190**	St. Louis
Binda, Robert E	**125**	Kansas City
Bindbeutel, Donald A	**190**	Sun City West, AZ
Binnington, H. B.	**190**	St. Louis
Binz, Donald E	**189**	St. Peters
Birchansky, Bonnie-Lee	**030**	St. Joseph
Bircher, John L	**190**	St. Louis
Bird, H. Waldo, Jr.	**190**	St. Louis
Bird, Jonathon M	**138**	Farmington
Birenboim, Nancy	**125**	Kansas City
Birge, Clifford A	**190**	St. Louis
Birkby, William F	**027**	Columbia
Birmingham, Jean E	**190**	St. Louis
Birnbaum, Elisa H	**190**	St. Louis
Bishop, Marion D	**190**	St. Louis
Bitar, Saad R	**195**	Manchester
Bittle, Bradley K	**042**	Cape Girardeau
Bizek, J. LI	**166**	Aurora
Black, David L	**102**	Joplin
Black, Don A	**125**	Prairie Village, KS
Black, Joseph T	**190**	St. Louis
Black, Kevin J	**190**	St. Louis
Blackburn, Michael D	**026**	Columbia
Blackwell, Charles R	**190**	St. Louis
Blackwell, Charles W	**026**	Columbia
Blades, Ross D	**082**	Springfield
Blaine, James R	**082**	Springfield
Blair, Olga M	**190**	St. Louis
Blair, Vilray P, III	**190**	St. Louis
Blalock, Robert W	**198**	Marshall
Blank, Michael K	**106**	De Soto
Blanke, Thomas J	**190**	St. Louis
Blankenship, Dale M	**042**	Savannah, GA
Blankenship, George W	**166**	Neosho
Blanton, Joseph C	**202**	Sikeston
Blaskiewicz, Robert J	**190**	St. Louis
Blath, Richard A	**190**	St. Louis
Blatt, Andrew	**195**	St. Louis
Blatt, Geoffrey L	**125**	Kansas City
Bligh, Richard A	**002**	Ballwin
Blim, R. Don	**125**	Kansas City
Blinder, Kevin J	**026**	Columbia
Block, Arnold S	**190**	St. Louis
Block, Jared G	**027**	Columbia
Bloom, Stephen A	**125**	Kansas City
Bloomberg, Gordon R	**190**	Chesterfield
Bluestone, Kenneth I	**125**	Leawood, KS
Blum, Carol A	**002**	Excelsior Springs
Blum, Donald A	**190**	St. Louis
Blum, Philip C	**125**	Kansas City
Blumenthal, Mark F	**190**	St. Louis
Blythe, James G	**190**	St. Louis
Boatright, Kevin	**138**	Farmington
Bocchini, Thomas P	**002**	St. Louis
Bock, David B	**125**	Kansas City
Bode, Eugene T	**125**	Kansas City
Boedeker, James P	**190**	St. Louis
Bogart, Douglas B	**125**	N. Kansas City
Bohigian, George M	**190**	St. Louis
***Bohn, Sara A**	**058**	California
Bohn, William W	**125**	Kansas City
Boice, Michelle A	**102**	Joplin
Boland, Michael F	**190**	Chesterfield
Boldizar, Albert G	**190**	St. Louis
Boldt, Thomas H	**190**	Bridgeton
Boles, C. R.	**190**	St. Louis
Boles, Murray	**026**	Columbia
Bolger, Michael J	**002**	St. Louis
Bolinske, Robert E	**190**	St. Louis
Bollozos, George D	**190**	Chesterfield
Bomar, Sally A	**126**	Lee's Summit
Bonacorsi, John	**190**	Bridgeton
Bonar, Susan K	**125**	Kansas City
Bondurant, Charles P	**026**	Columbia
Bonebrake, Albert J	**082**	Springfield
Bonebrake, Mac D	**082**	Springfield
Bonfanti, Albert L	**190**	Chesterfield
Bonham, Roger D	**026**	Columbia
Boniuk, Isaac	**190**	St. Louis
Bonney, Samuel C	**074**	Washington
Bonourant, Holly H	**027**	Columbia
Bonsanti, Robert L	**190**	Bridgeton
Boone, Daniel C	**050**	Gladstone
***Boone, Gina E**	**002**	Smithville
Boone, Martin H, Jr.	**082**	Springfield
Boone, Vicky L	**082**	Springfield
Boonshaft, Benje	**190**	St. Louis
Booth, Randall K	**126**	Prairie Village, KS
Bopp, J. Ronald	**102**	Joplin
Bordy, Marvin D	**125**	Kansas City
Borello, Dan J	**102**	Joplin
Borhani, Hesamodin	**126**	Kansas City
Borja, Egbert R	**082**	Springfield
Borowsky, Benjamin A	**190**	St. Louis
Borrego, Raul A	**138**	Farmington
Borup, Jerrell L	**082**	Springfield
***Bosley, Carl E**	**034**	Poplar Bluff
Bost, Roger K	**034**	Poplar Bluff
Boswell, C. B.	**195**	St. Louis
Botney, Kathryn	**190**	Chesterfield
Botwin, Arnold E	**125**	Leawood, KS
Bouhasin, John D	**190**	St. Louis
Boulware, Robert	**078**	Chillicothe
Boulware, William T	**078**	Chillicothe
Bourgeois, Curtis H	**026**	Columbia
Boutwell, Christine M	**126**	Kansas City
Boveri, Joseph C	**190**	St. Louis
Boveri, Lawrence V	**002**	St. Louis
Bowe, Christopher C	**190**	St. Louis
Bowen, Stephen F, Jr.	**190**	St. Louis
Bowenschulte, Bradley A	**082**	Springfield
Bower, James S	**125**	Kansas City
Bowers, Gregory R	**202**	Matthews
Bowers, James E	**190**	Kirkwood
Bowersox, Warren A	**190**	Pacific
Bowles, G. R.	**190**	St. Louis
Bowles, Richard P	**050**	Liberty
Bowlin, Steven K	**125**	Kansas City
Bowman, W. Kirk	**042**	Cape Girardeau
Bownik, Theodore B	**050**	Kansas City
Bowser, John F	**125**	Hot Springs, AR
Bowser, Robert L	**050**	Independence
Boyarsky, Saul	**190**	St. Louis
Boyce, John M	**178**	Sedalia
Boyd, Craig W	**190**	St. Louis
Boyd, George K	**125**	Shawnee Mission, KS
Boyd, James H	**190**	St. Louis
Boydston, Catherine O	**118**	Odessa
Boydston, Wyatt W	**118**	Odessa
Boyer, Peter A	**058**	Jefferson City
Boylan, Peter C	**125**	Kansas City
Brabbee, Gregory W	**190**	St. Louis
Brabson, John H	**082**	Springfield
Braby, Howard H	**125**	Independence
Braddock, Stephen	**026**	Columbia
Bradford, John F	**125**	Shawnee Mission, KS
Bradley, J. Douglas	**030**	St. Joseph
Bradley, Richard V	**190**	St. Louis
Bradley, William W	**026**	Centralia
Bradshaw, William D	**125**	Kansas City
Brady, Harry R	**190**	St. Louis
Brady, Hugh S	**118**	Concordia
Brady, Jane R	**195**	St. Louis
Brady, Teresa M	**125**	Raytown
Brancato, Donald H	**190**	St. Louis
Branch, Walter D, Jr.	**125**	Kansas City
Brand, Stanley N	**125**	Kansas City
Brangle, Robert W	**190**	St. Louis
Branham, Gregory H	**190**	St. Louis
Braun, Alan L	**058**	Jefferson City
Braun, William J	**125**	Kansas City
Braverman, Abe E	**125**	Overland Park, KS

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*Doctor of Osteopathy

Braverman, Stuart J	**178**	Sedalia
Braxton, Frank W	**042**	Cape Girardeau
Brazos, John C	**178**	Sedalia
Breckenridge, Robert L	**050**	Kansas City
Bredemann, Jeffrey A	**125**	Parkville
Breeding, Lyle G	**026**	Columbia
Bregant, Robert E	**058**	Jefferson City
Brehm, G. Scott	**102**	Joplin
Brehm, Martha A	**102**	Joplin
Breite, Warren M	**106**	Festus
Brennan, Daniel J	**190**	St. Louis
Brennan, George A	**190**	St. Louis
Brennan, James M	**190**	St. Louis
Brennan, Richard J	**030**	St. Joseph
Brennan, Robert A, Jr.	**190**	St. Louis
Brennan, Robert V	**190**	St. Louis
Brennan, Robert A, Sr.	**190**	St. Louis
Brent, Lanny R	**082**	Springfield
Bresnahan, Dennis R	**125**	Kansas City
Brewer, Joseph H	**125**	Kansas City
Brian, William J	**082**	Springfield
Bricker, Eugene M	**190**	St. Louis
Brigden, Robert B	**102**	Neosho
Briggs, Thomas B	**082**	Springfield
Brigham, David W	**190**	Ballwin
Bright, James E	**082**	Springfield
Brink, David S	**195**	St. Louis
Brinkman, Robert A	**190**	Chesterfield
Brischetto, Michael J	**190**	St. Louis
Bristow, Robert B	**030**	St. Joseph
Britt, Cornelius L	**106**	Crystal City
Britton, Loretta M	**125**	Kansas City
Broaddus, Loren E	**082**	Springfield
Brock, Arthur L	**125**	Independence
Brockhaus, Jayne R	**110**	Warrensburg
Brockman, M. Douglas	**082**	Springfield
Brodeur, Armand E	**190**	St. Louis
Brodkey, Mark J	**125**	Kansas City
Brody, Arnold G	**190**	St. Louis
Bronson, Shael S	**190**	St. Louis
***Bronson, Wendell D**	**030**	St. Joseph
Brook, Charles J	**125**	Kansas City
Brookes, Robert D	**190**	Chesterfield
Brookreson, Alton D	**034**	Poplar Bluff
Brooks, John E	**082**	Rogersville
Broun, Goronwy O, Jr.	**190**	St. Louis
Brower, Clyde L	**125**	Independence
Brown, Adrian J	**125**	Kansas City
Brown, Barry D	**190**	St. Louis
Brown, Cynthia L	**034**	Poplar Bluff
Brown, David W	**082**	Springfield
Brown, Elwyn S	**125**	Kansas City
Brown, Frances	**125**	Kansas City
Brown, Frederick B	**166**	Aurora
Brown, Freeman F, III	**190**	Ballwin
Brown, James T	**082**	Springfield
Brown, Katherine S	**038**	Overland Park, KS
Brown, Keith A	**190**	Waukesha, WI
Brown, Merlin D	**030**	St. Joseph
Brown, Michael S	**026**	Columbia
Brown, Mike J	**042**	Cape Girardeau
Brown, Norbert W	**125**	Kansas City
Brown, Rebecca L	**082**	Springfield
Brown, Robert J	**189**	St. Charles
Brown, Robert S	**125**	Shawnee Mission, KS
Brown, Seymour	**190**	Chesterfield
Brown, Steven L	**195**	St. Louis
Browne, Jon E	**125**	Kansas City
Brownsworth, Ronnie D	**082**	Springfield
Bruce, Leo A	**202**	Sikeston
Bruce, Robert P	**125**	Kansas City
Brukardt, Diane T	**026**	Columbia
Bruno, Patrick L	**150**	Hannibal
Bruns, Kenneth	**190**	St. Louis
Brunt, L. Michael	**190**	St. Louis
Brunts, John T	**126**	Kansas City
Brunworth, David	**074**	Washington
Bruso, Charles E	**125**	Kansas City
Bry, Lynn	**195**	St. Louis
Bryan, Bruce L	**190**	St. Louis
Bryant, Lester R	**026**	Columbia
Bryant, T. J.	**125**	Kansas City
Bryer, Mark P	**026**	Columbia
Buchanan, Barbara N	**125**	Kansas City
Bucher, William C	**026**	Columbia
Buchert, Peter K	**026**	Columbia
Bucholz, Richard D	**190**	St. Louis
Buchwach, Kenneth A	**125**	Independence
Buckner, John W	**082**	Springfield
Buckner, Robert C	**125**	Shawnee Mission, KS
Bucy, James G	**002**	St. Louis
Budd, John J, Jr.	**190**	St. Louis
Budke, Harold A	**125**	Kansas City
Buehler, Carl T, Jr.	**120**	Eldon
Buergler, John M	**195**	St. Louis
Buettner, John Brigha	**190**	Chesterfield
Buffaloe, Robert N	**058**	Jefferson City
Buie, Bruce R	**125**	Kansas City
Buie, Steven E	**125**	Kansas City
Bukstein, Michael J	**150**	Hannibal
Bult, Mark J	**082**	Springfield
Bumberry, John R	**082**	Springfield
Bumgarner, James E	**026**	Columbia
Bumgarner, Roger W	**026**	Columbia
Bunge, Nancy J	**014**	Mexico
Bunting, Williston P	**125**	Kansas City
Burch, John E	**102**	Naples, FL
Burch, Timothy K	**125**	Overland Park, KS
Burcham, Tom R	**042**	Farmington
Burchfield, John C	**195**	Rochester, NY
Burdge, Robert E	**190**	St. Louis
Burford, Edwin K	**042**	Cape Girardeau
Burgdorf, Max H	**190**	Bridgeton
Burgess, Dean	**190**	St. Louis
Burk, Emmett K	**050**	Irving, TX
***Burke, Paul E**	**190**	St. Louis
Burkey, Jordan W	**082**	Springfield
Burkhart, Edward F	**190**	Delray Beach, FL
Burks, Michael L	**026**	Columbia
Burleigh, Bruce W	**102**	Joplin
Burmeister, R. William	**190**	St. Louis
Burns, Edward L	**190**	St. Louis
Burns, Francis J	**190**	St. Louis
Burns, Michael F	**190**	St. Louis
Burns, Richard W	**026**	Columbia
Burns, Robert P	**026**	Sonoma, CA
Burns, Thomas W	**026**	Columbia
Burr, Donald C	**190**	Nashville, IL
Burroughs, Nathan D	**050**	N. Kansas City
Burry, Virgil F	**125**	Blue Springs
Burst, Donald O	**190**	St. Louis
Burstein, Robert	**190**	St. Louis
Burton, Curtis D	**150**	Hannibal
Busiek, Paul J	**082**	Springfield
Busse, Paul P	**190**	St. Louis
Bussmann, Carl E	**190**	Bridgeton
Bussmann, Donald W, Jr.	**082**	Springfield
Bussmann, Donald W	**190**	Chesterfield
Bussmann, Yvonne L	**082**	Springfield
Butin, Richard E	**125**	Kansas City
Butler, David F	**190**	Chesterfield
Butler, Elza F	**030**	St. Joseph
Butler, Susan M	**058**	Jefferson City
Butsch, Richard H	**190**	St. Peters
Butterfield, Mari Ann	**125**	Lee's Summit
Butterworth, Nelson S	**125**	Kansas City
Byars, Steven R	**125**	Kansas City
Byland, Samuel J	**146**	Wellsville
***Bynum, Carl G**	**058**	Jefferson City
***Bynum, Robert L**	**026**	Ashland
Byrum, Fritz A	**190**	Ballwin

*Doctor of Osteopathy

C

Cabanas, Justo J	125	Shawnee Mission, KS
Cabbabe, Edmond B	190	St. Louis
Cabral, Galileu	190	St. Louis
Cabrera, Tomas V	189	St. Peters
Cacioppo, Joseph E	190	St. Louis
Cady, Roger K	082	Springfield
Caffrey, Raymond J	125	Independence
Cain, Alvin R	018	Lamar
Calabria, Rafael	214	Nevada
Calaluce, Robert	027	Columbia
Caldwell, Fred M	034	Poplar Bluff
Caldwell, Joseph L	082	Springfield
Calhoun, Joshua W	190	St. Louis
Callahan, Donald E	190	St. Louis
Callahan, Joseph D	190	St. Louis
Callaway, Guy D, Jr.	082	Springfield
Callaway, Jo J	125	Kansas City
Callaway, Lawrence A	125	Kansas City
Callegari, Paul R	002	St. Louis
Callicoat, Paul E, Jr.	102	Joplin
Calodney, Martin M	190	St. Louis
Calovich, Emery R	125	Shawnee Mission, KS
Camejo, Manuel	082	Springfield
***Cameron, Roger W**	058	Jefferson City
Camp, Alan D	002	Bridgeton
Campbell, Albert J	178	Sedalia
Campbell, Daniel C	166	Mt. Vernon
Campbell, Edward D	042	Cape Girardeau
Campbell, Gregory S	026	Columbia
Campbell, J. William	190	St. Louis
Campbell, James E	046	Macon
Campbell, James W	202	Advance
Campbell, Sonya F	195	St. Louis
Campbell, William S, Jr.	042	Cape Girardeau
Campos, Francisco J	190	St. Louis
Canaan, Samuel A, Jr.	190	St. Louis
Canale, John P	189	St. Charles
Canent, Ramon V	125	Kansas City
Canlas, Mario P	082	Springfield
Cannon, Jenifer M	002	St. Louis
Cannon, Richard E	189	St. Charles
Cantor, Harvey E	190	St. Louis
Canty, Eugene J	189	St. Charles
Caplin, David A	190	St. Louis
Carden, Juan O	190	St. Louis
Carder, Steven A	002	Liberty
Cardwell, Daniel R	066	Bolivar
Carey, Larry J	082	Springfield
Carico, John B	195	St. Louis
Carleton, Charles E	138	Farmington
Carlin, Albert L	158	Stanberry
Carlin, M. Richard	190	St. Louis
Carls, Garry L	190	Imperial
Carlson, Arne E	190	Creve Coeur
Carlson, Hjalmar E	125	Overland Park, KS
Carlson, John V	014	Mexico
Carlton, Lynn N	082	Springfield
Carmody, John P	190	St. Louis
Carnahan, Charles E	026	Columbia
Carnes, Kenneth M	195	Webster Groves
Carnes, Victor M	102	Joplin
Carney, Stephen E	202	Sikeston
Carolla, Robert L	082	Springfield
Carothers, Karmel L	125	Independence
Carpenter, George T	030	St. Joseph
Carpenter, James L	189	St. Charles
Carpenter, Wallace	158	Rock Port
Carr, George W	058	Jefferson City
Carr, Phillip W	082	Reeds Spring
Carranza, Mauro J	190	St. Louis
Carrier, John A	190	Ballwin
Carrington, Howard W	115	Lebanon
Carroll, Danny K	214	Belton
Carroll, Thomas W	018	Lamar
Carron, Oscar A	174	Perryville
Carter, Edwin E	190	St. Louis
Carter, Gary L	125	N. Kansas City
Carter, James R	166	Neosho
Carter, James E, Jr.	125	Kansas City
Caruso, Alfred A	125	Kansas City
Caruso, Alfred C	126	Kansas City
Cary, John M	190	Chesterfield
Case, Mary E	190	St. Louis
Case, William F	125	Kansas City
Casement, Brian A	125	Kansas City
Casey, Arthur L	190	St. Louis
Casey, Edwin J	190	St. Louis
Casey, Eliot C	190	St. Louis
Cashman, John W	125	Shawnee Mission, KS
Cason, Elbert H	190	St. Louis
Cassat, James D	074	Washington
Castaneda, Marco A	190	Bridgeton
Caster, Philip W	115	Lebanon
Catanzaro, Frank J, Jr.	190	St. Louis
Catanzaro, Frank J, Sr.	190	St. Louis
Catanzaro, Rudolph E	190	St. Louis
Catron, David O	042	Cape Girardeau
Caughron, Michael R	125	Kansas City
Cavanaugh, Timothy B	125	Kansas City
Cayabyab-Loe, Lilibeth P	190	Mountain View, CA
Ceaser, Nancy H	082	Springfield
Centner, Paul J	125	Prairie Village, KS
Cento, Donald P	202	Sikeston
Cernik, Christine M	190	St. Louis
Chaffin, Jerald D	208	Branson
Chalk, David E	074	Washington
Chalkley, Judson I	026	Columbia
Chambon, Gregory E	125	Kansas City
Chamness, James T	190	Vero Beach
Chan, Celia L	042	Cape Girardeau
Chanasue, John A	190	Florissant
Chandler, Barry M	195	St. Louis
Chandler, R. Allen	125	Kansas City
Chandra, Mahesh	125	Independence
Chandramohan, Nanjappa	102	Carthage
Chang, Chil K	026	Columbia
Chapman, James B	042	Cape Girardeau
Chapman, Jean A	042	Cape Girardeau
Charapata, Steven G	125	Kansas City
Charette, Richard P	125	Kansas City
Charles, Elaine Z	190	St. Louis
Charles, Francois	190	St. Louis
Charnas, Raymond M	190	St. Louis
Chase, Larry K	082	Springfield
Chase, Ned B	102	Joplin
Chastain, Charles W	138	Flat River
Chatfield, Gina K	027	Columbia
Chaudhari, A. Basit	042	Cape Girardeau
Chaudhuri, Sudha T	125	Kansas City
Chaudhuri, Tapan K	125	Raytown
Chaudhury, Triptesh K	002	Port Arthur, TX
Chauhan, Nazar C	034	Poplar Bluff
Chavala, Sudarsan	158	Maryville
Chavez, Salvador	190	St. Louis
Chavez, Victor M	190	Ballwin
Cheek, Charles W	026	Columbia
Chehval, Micheal J	190	St. Louis
Chen, Jane	195	St. Louis
Chern, Mou S	206	Ava
Chernoff, Selbert G	125	Lee's Summit
Cherre, Charles J	190	Chesterfield
Chesney, George W	102	Joplin
Chesney, John W	102	Joplin
Cheuk, Shu-Sum	190	Chesterfield
Cheung, K. Charles	042	Cape Girardeau
Chilton, Jonathan D	125	Kansas City
Chin, Mark Maw-Chan	190	Chesterfield
Chinsky, Murray	190	St. Louis
Chipongian, Raul A	190	St. Louis
Chirino, Octavio R	190	St. Louis

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*Doctor of Osteopathy

Chishti, M. Ishaq	**190**	St. Louis
Cho, Kyu S	**190**	St. Louis
Chod, Ronald J	**190**	Chesterfield
Choe, Mira L	**190**	Oklahoma City, OK
Choi, Dennis W	**190**	St. Louis
Choi, Sei Youn	**189**	St. Charles
Chou, Alice Hsing-Fe	**126**	Shawnee, KS
Chou, Wesley H	**002**	Overland Park, KS
Choudhury, M. Hasan	**206**	Houston
Chouinard, Michael P	**202**	Sikeston
Chow, Frank M	**126**	Kansas City
Chowdhry, Shaheen N	**126**	Olathe, KS
Christ, Martin H	**030**	St. Joseph
Christiansen, Sidney G	**030**	St. Joseph
Christiansen, Stephen D	**082**	Springfield
Christianson, Charles S	**166**	Mt. Vernon
Christy, John P	**034**	Poplar Bluff
Christy, Raymond A	**082**	Springfield
Chu, Fred C	**190**	Chesterfield
Chu, Paul R	**125**	Independence
Chu, Peter Y	**125**	Kansas City
Chun, Chung S	**125**	Kansas City
Chun, Duck S	**190**	St. Louis
Chung, Kap Eu	**138**	Fredericktown
Chung, Sophia M	**190**	St. Louis
Chung, T. David	**034**	Poplar Bluff
Churchill, Robert J	**026**	Columbia
Churchill, Stephen W	**125**	Kansas City
Ciapciak, Stanley J	**190**	St. Louis
Cibis, Gerhard W	**125**	Kansas City
***Ciliberti, John A**	**050**	Kansas City
Cipperly, Vaughan R	**102**	Joplin
Clark, David P	**026**	Columbia
Clark, Granville E	**125**	Kansas City
Clark, Jennifer L	**026**	Columbia
Clark, Larry K	**102**	Joplin
Clark, Lin W	**125**	Blue Springs
Clark, Mark S	**126**	Kansas City
Clark, Robert C	**030**	St. Joseph
Clarke, Michael S	**082**	Springfield
Clarke, Michael J	**082**	Springfield
Clarke, Paul W	**042**	Cape Girardeau
Claseman, Wilma W	**190**	St. Louis
Clawson, James W	**082**	Springfield
Claycomb, Gerald K	**190**	Chesterfield
Clayton, Edgar L	**082**	Springfield
Clement, Donald J	**125**	Kansas City
Clever, Henry W	**189**	St. Charles
Clever, Victor G	**189**	St. Charles
Clifford, David B	**002**	St. Louis
Cline, Daniel M	**050**	Kansas City
Cline, Merle A	**125**	Kansas City
Cline, Patricia W	**125**	Liberty
Clohisy, John C	**195**	St. Louis
Clothier, Robert W	**125**	Independence
Clough, Charles A	**125**	Kansas City
Clouse, John W	**082**	Springfield
Clymer, David J	**125**	Kansas City
Coates, James G	**092**	St. Charles
Cobb, Milton L	**190**	St. Louis
Cochran, David S	**082**	Springfield
Cochran, Kimberly A	**126**	Olathe, KS
Cochran, Thomas E	**082**	Springfield
Cockerell, Charles F	**125**	Blue Springs
Cockerell, Sanford F	**125**	Independence
Cockrell, Steven N	**150**	Hannibal
Codd, John E	**190**	Bridgeton
Coffin, Cheryl M	**190**	Salt Lake City, UT
Coffin, Helen K	**125**	Shawnee Mission, KS
***Coffman, Avon C**	**125**	Kansas City
Cohen, Bruce H	**190**	St. Louis
***Cohen, Donald L**	**125**	Kansas City
Cohen, Edward	**190**	St. Louis
Cohen, Faye C	**195**	Cleveland, OH
Cohen, Harry B	**014**	Mexico
Cohen, Hillard K	**190**	St. Ann
Cohen, Joel N	**082**	Springfield
Cohen, Marvin C	**125**	Kansas City
Cohen, Robert S	**190**	St. Louis
Cohn, Steven G	**125**	Kansas City
Coin, Richard E	**190**	St. Louis
Cokingtin, Cliff	**125**	Overland Park, KS
Cokingtin, Diana L	**125**	Kansas City
Cokingtin, Leovigildo C	**125**	Independence
Colapinto, Edward V	**026**	Columbia
Colbert, Dennis G	**190**	St. Louis
Colbert, Robert S	**202**	Sikeston
Cole, Donald E	**066**	Springfield
Cole, Harry O	**190**	Chesterfield
Cole, Sherman W	**125**	Kansas City
Cole, William R	**178**	Sedalia
Coleman, Kevin A	**190**	St. Louis
Coleman, Matthew J	**042**	Cape Girardeau
Colglazier, Mary C	**125**	Lee's Summit
Collins, Douglass D	**082**	Springfield
Collison, R. Michael	**082**	Springfield
Colom, George A	**125**	Kansas City
Colter, Kim D	**074**	Washington
Colton, Eric S	**195**	Webster Groves
Colwill, Jack M	**026**	Columbia
Comas, Manuel R	**190**	St. Louis
Comens, Ruth C	**190**	St. Louis
Comfort, George D	**014**	Mexico
Commerford, John F	**189**	St. Charles
Conant, James F	**030**	St. Joseph
Conley, Brian S	**058**	Jefferson City
Conn, Robert D	**125**	Kansas City
Conoyer, J. Michael	**189**	St. Peters
Conrad, Marshall B	**190**	St. Louis
Conrad, Raymond C	**082**	Springfield
Contogiannis, Mary Ann C	**126**	Kansas City
Convery, Paul B	**190**	St. Louis
Conway, Robert R	**026**	Columbia
Cook, James R	**082**	Springfield
Cook, Katherine S	**135**	Rolla
Cook, Marvin	**190**	St. Louis
Cook, Paul R	**026**	Columbia
Cook, Thomas B	**118**	Richmond
Cooksey, Jon D	**190**	St. Louis
Cooper, Barry R	**050**	N. Kansas City
Cooper, Barry J	**190**	St. Louis
Cooper, C. Wesley	**082**	Springfield
Cooper, Gary D	**050**	Liberty
***Cooper, Glen E**	**026**	Columbia
Cooper, James F	**190**	Bridgeton
Cooper, Robert L, II	**110**	Warrensburg
Cooper, Thomas J	**190**	Farmington
Coordes, Cordie C	**190**	Chesterfield
Coordes, Kathleen M	**190**	St. Louis
Cope, Candise D	**027**	Nixa
Cope, James C	**026**	Sanibel, FL
Copeland, Jeffrey G	**189**	St. Charles
Copp, Ralph	**190**	St. Louis
Coppinger, Thomas A	**125**	Kansas City
Corcoran, Francis H	**102**	Joplin
Corcoran, Michael J	**027**	Fulton
Cordell, Larry D	**125**	Kansas City
Corder, James C	**190**	St. Louis
Corder, Patricia G	**190**	St. Louis
Corder, Robert L	**030**	St. Joseph
Cornwell, Karen R	**125**	Kansas City
Corrado, Joseph A	**014**	Mexico
Corry, Francis M	**082**	Springfield
Corry, James M	**190**	St. Louis
Cortner, Mary C	**125**	Kansas City
Corvalan, Juan C	**190**	St. Louis
Corwin, Kenneth D	**190**	St. Louis
***Corzine, John J**	**030**	St. Joseph
Coscia, Robert L	**082**	Springfield
Costello, Joseph P, Jr.	**190**	Chesterfield
Costen, William S	**190**	Chesterfield
Costigan, David J	**190**	St. Louis

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*Doctor of Osteopathy

Costin, Jimmy L	Poplar Bluff	034
Cotner, Mark S	Joplin	102
Cotton, Thomas R	Kansas City	125
Couch, Jeffrey M	N. Kansas City	002
Couchman, Ryan W	St. Louis	190
Coulson, Forest H	Whitewater	042
Coulter, Steven L	Kansas City	125
Couper, Nicholas B	Columbia	026
*Courter, Gary M	Lebanon	115
Courter, Larry P	Osage Beach	058
Covarrubias, Jorge A	Collinsville, IL	190
Covert, Richard A	St. Louis	190
Cowden, John W	Columbia	026
Cox, Curtis S	Jefferson City	058
Cox, James L	St. Louis	190
Cox, Jeffrey L	Joplin	102
*Cox, John M	Joplin	102
Cox, John P	Amazonia	030
Cox, W. Welby	Springfield	082
Coxe, William S	St. Louis	190
Coyne, Patrick M	Bridgeton	190
Cozad, Scott C	Kansas City	125
Cozean, Charles H	Cape Girardeau	042
Crabtree, H. Mark	Springfield	082
Crabtree, Jay B	Bolivar	066
Cradock, Thomas V	St. Louis	190
Crafts, David	St. Louis	190
Craig, Alan G	St. Louis	190
Craig, Jonetta M	St. Louis	002
Craig, Richard O	St. Joseph	030
Craig, Robert D	St. Louis	002
Craighead, Michael L	Jefferson City	058
Cram, John W	Springfield	082
Cramer, Quentin	Kansas City	125
Crandall, Richard E	Chesterfield	190
Crane, James P	St. Louis	190
Crane, John B	Washington	074
*Crane, William G	Lenexa, KS	126
Cravens, David D	Centralia	026
Cravens, William P	Fulton	038
Craver, Jeffrey L	Bridgeton	190
Crawford, Katherine J	Carrollton	190
Crawford, Kimberly M	St. Louis	195
Crawford, Oral B	Springfield	082
Creech, Fred T	Columbia	026
Crepps, Louis F	St. Louis	190
Crespin, Stephen R	St. Louis	190
Crespo, Horacio T	Warrenton	074
Crespo, Remedios R	Warrenton	074
Creswell, Lawrence L	Chesterfield	195
Crie, J. Stanley	St. Joseph	030
Crighton, John C	Springfield	082
Criscione, James R, Jr.	St. Louis	190
Criscione, James R, Sr.	St. Louis	190
Criscione, James S	St. Louis	190
Crisp, N. Denney	Independence	002
Crist, Roderic C	Cape Girardeau	042
Critchlow, J. Thomas	Cape Girardeau	042
Critchlow, Michael E	Cape Girardeau	042
Critchlow, William C	Sikeston	202
Crockett, James E	Rancho Santa Fe, CA	125
Crockett-Maples, Melinda	Springfield	082
Croll, Gregory H	Columbia	026
Cronemeyer, Richard L	Lee's Summit	125
Crosby, William H	Joplin	102
Crotty, John P	St. Louis	190
Crouch, John A	Columbia	026
Croughan, Jack L	St. Louis	190
Crow, Martin L	Kansas City	125
*Crowell, Tamara E	Kansas City, KS	126
Crowley, William J	Columbia	026
Crumpacker, Margaret	St. Louis	190
Cruz, Sergio G	Monett	166
Cryer, Philip E	St. Louis	190
Cubillo, Enrique	St. Louis	190
Cuddihee, Robert E	St. Louis	190
Culver, Perry J, Jr.	Kansas City	125
Cummings, Kenneth C	Kansas City	125
Cummings, Steven W	Brentwood	190
Cundiff, H. Clay	Independence	125
Cunningham, D. Dean	Springfield	082
Cunningham, Edwin J	Chesterfield	190
Cunningham, Milamari A	Columbia	026
Cunningham, R. Raymond	Columbia	026
Cunningham, Richard D	Springfield	082
Cunningham, William F	Springfield	082
Cupp, Gerald V	Columbia	026
Curnow, Richard B	Liberty	050
Curran, Terrence	Kansas City	125
Curry, D. Troy	St. Louis	190
Curry, Michael D	Columbia	026
Curry, Michael J	St. Charles	189
Curtis, Jack J	Columbia	026
Custer, Galen M	Kansas City	125
Custer, Robert M	Fenton	190
Cusumano, Joseph V	St. Louis	190
Cusworth, Robert	St. Charles	189
Cutler, Harold M	St. Louis	190
Cygan, Ronald W	Kansas City	125
Cyriac, George K	Mexico	014
Czebrinski, Edward W	Chesterfield	190

D

*D'Angelo, James A	Kansas City	126
Daake, John W, Jr.	St. Louis	190
Daake, John W, Sr.	St. Louis	190
Dabbs, Wilbur D	Neosho	166
Dacey, Ralph G, Jr.	St. Louis	190
Dagartzikas, A. K.	St. Louis	190
Dahm, Charles H, Jr.	St. Louis	190
Daily, James M	Springfield	082
Daley, Frank R	Hamilton	078
Dalton, Arthur R	St. Louis	190
Dalton, Timothy T	Kansas City	125
Daly, James W	Columbia	026
*Daly, Michael M	Columbia	026
Dames, Richard J	Chesterfield	190
Dandridge, Walter C	Joplin	102
Danforth, William H	St. Louis	190
Dang, Robert C	Pleasant Hill	214
Daniel, A. E.	Columbia	026
Daniels, John S	St. Louis	002
Danielsson, Ernst P	Springfield	082
Dankner, Arnold	Chesterfield	190
Dankner, Rand E	Chesterfield	190
Danner, Shavonne L	Kansas City	125
Daon, Emmanuel	Shawnee, KS	126
Darby, Patric J	Columbia	027
Darkow, Grant V	Columbia	026
Darlow, Lloyd	Chesterfield	190
Darmadi, Daniel H	St. Louis	195
Darnell, Dale E	Kansas City	125
Dash, Udaya N	Bonita Springs, FL	190
Dattel, F. Scott	Raytown	002
Daum, Harold F	Sedalia	178
Daus, Arthur Steve	Joplin	102
Dausmann, Gary W	Poplar Bluff	034
Davault, George K	Richmond	118
Davidner, Mark L	Kansas City	125
Davidson, Morris	St. Louis	190
Davidson, Raymond P	St. Louis	190
Davis, Alexander C	Overland Park, KS	125
Davis, Bradley E	Overland Park, KS	125
Davis, Carl S	Lee's Summit	125
Davis, Carolyn T	Overland Park, KS	125
Davis, Charles S	Galena, KS	102
Davis, Donald R	Prairie Village, KS	125
Davis, Gene L	St. Louis	190
Davis, Herbert V	Kansas City	125
Davis, J. Lawrence	St. Louis	190
Davis, Jack M	Kansas City	125

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*Doctor of Osteopathy

*Davis, Larry E	050	N. Kansas City
Davis, Leonard L	014	Mexico
Davis, Mary A	190	St. Louis
Davis, Michael L	126	Kansas City
Davis, Sheldon	190	Florissant
Davis, Thomas N	138	Mountain View
Davis, W. Bob	002	Mission, KS
Davis, William E	026	Columbia
Davisson, Walter F	058	Jefferson City
Davuluri, Sreenadha R	030	St. Joseph
Day, Chester L	125	Prairie Village, KS
Dean, Philip D	014	Washington
Dean, Walter E	158	Maryville
Deane, Louis V, Jr.	190	St. Louis
Deardeuff, Dwight L	135	Rolla
DeBoard, James W	190	St. Louis
DeCastro, Edna C	002	Kansas City, KS
DeCastro, Fernando J	138	Pilot Knob
Deckard, Shelby W	082	Springfield
Decker, Albert I	082	Springfield
DeCoursey, Kenneth A	042	Cape Girardeau
DeFeo, Frederick G	125	Kansas City
DeFeo, Theodore C	125	Kansas City
*Deffenbaugh, Larry D	102	Joplin
DeGenova, Gerard H	174	Ste. Genevieve
DeGraff, Judith K	126	Mission, KS
DeGuerre, Ronald K	190	Chesterfield
Dehner, Jonathan D	190	St. Louis
Dehner, Louis P	190	St. Louis
Dehning, Doug O	125	Independence
*Dekker, Anthony H	125	Kansas City
Del Pizz, Ferdinand	189	St. Charles
Del Prior, Lucian V	002	St. Louis
Del Rosari, John E	190	St. Louis
Del Sant, Peter B	026	Columbia
Del Vall, Fernando	190	Margate, FL
*Delaney, Adrain J, Jr.	125	Kansas City
Delcambre, Marie A	125	Kansas City
deLeeuw, Karel A	082	Springfield
Deleste, Carlos J	106	Festus
Delgado, Eliana	002	St. Louis
Deligeorges, John	050	Kansas City
DeLine, Jim	046	Macon
Dell, Robert V	150	Hannibal
*DeLucia, Joseph A	206	West Plains
Delwood, Don M	026	Columbia
Delzell, John E, Jr.	027	Columbia
Demark, Thomas D	126	Independence
Dembinski, David R	125	Kansas City
Dement, Oman E	102	Joplin
Demmy, Todd L	026	Columbia
DeMotte, Jeanne M	118	Richmond
Dempsey, Herbert A	125	Lee's Summit
*Dempsey, Herbert E	125	Lee's Summit
Dempsey, Kenneth J	202	Sikeston
Dempsey, Maureen E	026	Columbia
Denes, Bela	190	Bridgeton
Denk, Alan F	190	St. Louis
Denninghoff, James C	026	Columbia
Denninghoff, James S	026	Columbia
Dent, George W	138	Farmington
*Depew, Deborah A	074	Sullivan
DePriest, Michael D	030	St. Joseph
DeRosa, Michael J	190	St. Louis
Desai, Vinay N	195	St. Louis
DeSilva, Ananda	190	Hazelwood
Desio, Marcus A	102	Joplin
DeSpain, John D	125	Kansas City
*Detten, William R	082	Springfield
Dettmer, Robert F	138	Ironton
DeUngria, Pablo C	190	Bridgeton
Devabhaktuni, Rama Dev	190	Ballwin
Dever, Robert L	102	Joplin
DeVera, Anson E	190	St. Louis
Devine, Mark W	050	N. Kansas City
Devineni, V. Rao	190	Bridgeton
Devins, George S	125	Kansas City
Devkota, Jagadishwar	026	Columbia
Dew, Thomas A	190	Chesterfield
Dewald, Paul A	190	St. Louis
Dewein, Edward G	190	St. Louis
Dexheimer, Frank R	026	Columbia
Dexter, J. Kent	082	Springfield
Dexter, James D	026	Columbia
Dick, Earl	026	Columbia
Dick, M. Marga	026	Ashland
Dickerson, Malcolm J	058	Eldon
Diebner, Debra K	195	St. Louis
Diedriech, Linda L	190	St. Louis
Diehl, Elizabeth W	190	St. Louis
Diemer, David P	190	St. Louis
Diemer, Jean	042	Cape Girardeau
Diemer, Peter A	190	St. Louis
Diemer, Thomas S	042	Cape Girardeau
Dierberg, Dale F	074	Chesterfield
Dierenfeldt, William T	126	Kansas City
Dierker, Harry D	026	Columbia
Diestelhorst, James A	190	St. Louis
Dieterich, Russell B	189	St. Charles
Dieterle, Brian D	208	Branson
DiFilippo, Emil A	189	St. Charles
Dill, Laura L	125	Kansas City
Dillard, Burl M	190	St. Louis
Dillard, Erin M	082	Springfield
Dills, Joseph N	082	Springfield
Dilts, Preston V, Jr.	125	Kansas City
Dilworth, Jacquelyn B	190	St. Louis
Dimayuga, Nestor G	206	Mansfield
Dinkins, James A	042	Cape Girardeau
DiPasco, Donald J	190	St. Louis
DiTirro, Frank J	125	Kansas City
Ditmore, Q. Michael	026	Columbia
*Ditzel, Douglas W	102	Joplin
Divelbiss, Karen L	126	Kansas City
Dix, Patricia M	082	Springfield
Dixon, Druery J	206	West Plains
Dixon, G. David	125	Kansas City
Dixon, John R	078	Brookfield
Dlabal, Luke J, Jr.	125	Independence
Dlabal, Luke J, Sr.	125	Independence
Dmytryk, Eugene T	190	St. Louis
Doan, Laura B	125	Raytown
Dodge, Philip R	190	St. Louis
Dodson, Jack M	058	Jefferson City
Doerhoff, Adelia L	058	Jefferson City
Doerhoff, Alan R	058	Jefferson City
Doerhoff, Carl R	058	Jefferson City
Doerr, Dale E	190	St. Louis
Doisy, Philip P	190	St. Louis
Dolan, Patrick H	190	St. Louis
Domann, Darrel D	082	Springfield
Domke, Henry F	058	New Bloomfield
Donahoe, James L	190	St. Louis
Donati, Robert M	190	St. Louis
Donnell, Harold E	106	De Soto
Donnell, Robert H	106	Crystal City
Donnell, William S, Jr.	066	Bolivar
Donovan, John F	190	St. Louis
Donovan, Thomas J	190	St. Louis
Dorsch, Ervin H	125	Independence
Dorsch, Stephen E	125	Independence
Dorton, Robert K	190	St. Louis
Dorzab, Linda L	125	Overland Park, KS
Dorzab, William E	125	Kansas City
Dos Santo, Enrique	026	Columbia
Dotson, Lori J	026	Boonville
Dougherty, Thomas M, Jr.	054	Plattsburg
Dowell, George H	190	St. Louis
Downey, James W	125	Kansas City
Downey, Janice L	002	Kansas City
Downey, Jon P	042	Cape Girardeau
*Downs, Craig E	082	Springfield

Downs, Daniel M Kansas City	**125**
Downs, Mary K Springfield	**082**
Doyle, Charles R St. Louis	**190**
Drake, Roy F Mission, KS	**125**
Drake, William L, Jr. St. Louis	**190**
Draney, Thomas E Hiwasse, AR	**125**
Drapcho, Connie S Joplin	**102**
Dreher, Richard L Leawood, KS	**125**
Drescher, Emmett B St. Louis	**190**
Dresner, Steven M Columbia	**026**
Drews, Robert C St. Louis	**190**
Dreyer, Carl J St. Louis	**190**
Dreyer, Philip V Huntsville	**046**
Driskell, Karen K Kansas City	**125**
Drisko, Robert M Kansas City	**125**
Drisko, Robert M, II Kansas City	**125**
Druck, Norman S Chesterfield	**190**
Druet, Robert L Springfield	**082**
Duda, Ralph J, Jr. Springfield	**082**
Dudik, Randall G Rolla	**135**
Duemler, Robert H Glenco	**190**
Duensing, George F Springfield	**082**
Duer, Mildred C Kansas City	**125**
Duerksen, Joseph J Kansas City	**125**
Duff, James E Springfield	**082**
Duff, John A Springfield	**082**
Duff, William M Rolla	**135**
Duffy, Oliver F Trenton	**078**
Dugan, Gerald F Kansas City	**125**
Duick, Daniel S Cape Girardeau	**042**
Duling, Gerald J St. Charles	**189**
Dumadag, Virgilio P St. Louis	**190**
Duncan, David T St. Peters	**189**
Duncan, Douglas M Springfield	**082**
Duncan, Robert D Springfield	**082**
Duncan, William H Naples, FL	**125**
Dunlap, Michael D St. Joseph	**030**
Dunlap, Patrick S Joplin	**102**
Dunn, Charles W Springfield	**082**
Dunn, Robert C, Jr. St. Louis	**190**
Dunshee, Robert E Maryville	**158**
Dunteman, Edwin D Ballwin	**190**
Durel, Justin H St. Louis	**190**
Durie, Robert H Kansas City	**125**
Durnell, Monaford D Lee's Summit	**125**
Durr, Jon W Florissant	**190**
Durrie, Daniel S Kansas City	**125**
Dusek, Dennis A St. Louis	**190**
DuMont, Clement C St. Joseph	**030**
DuMonteer, Gary Washington	**074**
DuMontier, Alan J Chesterfield	**190**
Dwyer, Frank X Shawnee Mission, KS	**125**
Dwyer, James G St. Louis	**190**
Dyer, Curtis W Warrensburg	**110**
Dyer, Dallas J St. Louis	**190**
Dyer, Gary A St. Joseph	**030**
***Dykstra, John S** Kansas City	**050**

E

Eachempati, Uma R Florissant	**190**
Eades, Joseph W Chesterfield	**190**
Early, Gerald L St. Joseph	**030**
Earnest, James B Kansas City	**125**
Eaton, Frank M St. Louis	**002**
Eaton, Paula Kansas City	**125**
Ebelke, David K N. Kansas City	**125**
Eberle, Vincent L St. Louis	**190**
Eckenrode, James F Columbia	**026**
Ecker, Desider B Sun City Center, FL	**190**
Eckert, Clarence T Longboat Key, FL	**190**
Edele, Eugene H St. Louis	**190**
Edelman, Alan H St. Louis	**190**
Edelman, Kent J Joplin	**102**
Edmisten, Jack Nevada	**125**
Edmonds, Robert W Chesterfield	**002**
Edwards, David R Sedalia	**178**
Edwards, Dean A Cape Girardeau	**042**
Edwards, James E St. Louis	**190**
Edwards, Ryan K Sedalia	**178**
Edwards, Theodore F Kansas City	**050**
Efstathianos, Kimon Belleville, IL	**190**
Egan, Robert C St. Louis	**190**
Egan, Thomas F St. Louis	**190**
Egbert, Robert N Springfield	**082**
Eggers, George W, Jr. Columbia	**026**
Eggleston, Harry C St. Louis	**190**
Eggleston, Thomas F St. Louis	**190**
Ehrlich, Carl F St. Louis	**190**
Eidelman, Jack R St. Louis	**190**
Eisemann, Gustave Kansas City	**125**
Eisen, Arthur Z St. Louis	**190**
Eisenbeis, John F St. Louis	**190**
Eisenberg, Steven B Chesterfield	**190**
Eisenmann, Benjamin P New Haven	**074**
Ekern, H. Peter Mexico	**014**
Ekunno, Josiah O St. Louis	**190**
Elcock, Devera M Ballwin	**190**
Eldenburg, Donald O Sedalia	**178**
***Eldenburg, Steven C** Sedalia	**178**
Elfrink, Melanie Ede Marshall	**198**
Elfrink, Roy J Marshall	**198**
Elias, David J Lake Tapawingo	**125**
Eliasson, Sven G St. Louis	**190**
Elkins, Robert L Kansas City	**125**
***Ellefsen, Brian K** Carthage	**102**
Eller, Gordon W Cape Girardeau	**042**
Ellfeldt, Howard J Kansas City	**125**
Elliott, Raymond G Shawnee Mission, KS	**125**
Elliott, Timothy H Kansas City	**126**
Elliott, Wendell H Poplar Bluff	**034**
Ellis, Francis J Springfield	**082**
Ellis, Harry L Springfield	**082**
Ellis, Jean H Blue Springs	**125**
Ellis, John C Independence	**125**
Ellis, Ronald L Springfield	**082**
Ellis, Stephen C Independence	**125**
Ellsasser, James C Rocheport	**026**
Elser, Otto H Independence	**125**
Elwing, Terry J Columbia	**026**
Ely, Norman B Springfield	**082**
Emanuel, James P St. Louis	**190**
Emeran, George J St. Louis	**190**
Emerson, William A St. Louis	**190**
Emons, Matthew F St. Louis	**190**
Engelberg, Alan L St. Louis	**190**
Engelhardt, Robert C Poplar Bluff	**034**
Engels, John T St. Louis	**002**
Enriquez, Roman S Kansas City	**125**
***Entrup, Mark H** Springfield	**082**
Eppright, Thomas D Columbia	**026**
Epstein, Beverly Mt. Vernon	**166**
Ernst, Edwin C, III St. Louis	**190**
Ernst, Edwin C, Jr. St. Louis	**190**
Ernst, Joseph G St. Louis	**190**
Ernst, Richard E St. Louis	**190**
Ernst, Roland P St. Louis	**190**
Ervin, John E Kansas City	**125**
Esch, John G Joplin	**102**
Escher, Delbert T, Jr. Ballwin	**002**
Escoffery, Richard F Florissant	**190**
Esguerra, Eden M Joplin	**102**
Espaillat, Jose A Sikeston	**202**
Esparrago, F. R. Monett	**166**
Esther, James H St. Louis	**190**
Esther, John W Springfield	**082**
Esther, John R Joplin	**102**
Estrem, Scott A Columbia	**026**
Ethirajan, Sukumar Kansas City	**125**
Eto, Jackson K St. Louis	**190**
Ettelson, Charles D Chesterfield	**190**
Eubank, David F Lee's Summit	**125**

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*Doctor of Osteopathy

Eubank, William Y	125	Leawood, KS
Evans, Andrew L	082	Springfield
Evans, Ezra L	082	Springfield
Evans, George A	026	Columbia
Evans, Joseph M	150	Hannibal
Evans, Joseph C, Jr.	125	Independence
Evans, Lawrence G, Jr.	190	St. Louis
Evans, Maria L	027	Columbia
Evens, Ronald G	190	St. Louis
Evenson, Curtis C	082	Springfield
Eversoll, Norton J	190	Ft. Lauderdale, FL
Ewing, Lesley L	125	Kansas City
Ewy, Marvin F	026	Columbia
Exon, C. S.	058	Jefferson City
Eyerman, Edward L	190	St. Louis

F

Fabito, Daniel C	190	St. Louis
Faddis, Mitchell N	195	St. Louis
Fagan, Leonard F, Jr.	190	St. Louis
Fahrner, Mari A	190	Chesterfield
Fair, William L	078	Chillicothe
Fakhoury, Donald A	050	Kansas City
Fallon, Richard H	190	St. Louis
Falter, Richard J, Jr.	126	Kansas City
Falzone, John J	058	Jefferson City
Farber, Barry S	082	Springfield
Farberman, Elliott	190	Florissant
Farkas, James R	178	Sedalia
***Farley, Gary W**	190	St. Louis
Farmer, Norma D	138	Farmington
Farnham, Milo M	125	Independence
Faron, Mark A	190	Chesterfield
Farrar, Michael W	125	Shawnee Mission, KS
Farrell, John S	190	Bridgeton
Farrell, Sammy L	074	Washington
Farrell, Thomas M	002	St. Louis
Farthing, Gene W	082	Springfield
Farzana, Farida	190	St. Louis
Fast, Robert E	030	St. Joseph
Faszholz, Mark S	190	St. Louis
Fathman, Anthony E	190	Chesterfield
Faulkner, C. Byron	082	Springfield
Favors, Adolphus C, Jr.	190	St. Louis
Fedotin, Michael S	125	Kansas City
Fee, Chester F	125	Fairway, KS
Feit, Robert M	190	St. Louis
Feldman, David	190	St. Louis
Feliciano, Wilfrido C	190	Maryland Heights
Felker, C. Edward, III	202	Sikeston
Felker, J. Russell	042	Cape Girardeau
Feller, Harold H	190	Chesterfield
Ferber, Alan J	125	Kansas City
Ferguson, Edward W	195	Clayton
Ferguson, John P	082	Springfield
Ferguson, John F	082	Springfield
Ferguson, John L	082	Springfield
Fernandez, Fernando	030	St. Joseph
Ferneau, James E	026	Columbia
Ferns, Francis E	125	Kansas City
Ferrara, Robert P	190	St. Louis
Ferrari, Herbert A	190	St. Louis
Ferris, Charles W, Jr.	190	St. Louis
Ferris, Robert E	058	Jefferson City
Fibuch, Eugene E	125	Kansas City
Figueroa, Eliseo O	190	St. Louis
***Finch, Emil E**	198	Marshall
Fingert, Hyman H	190	St. Louis
Fink, Leroy L	190	St. Louis
Fink, Roger L	082	Springfield
Finkel, Barney W	190	N. Ft. Myers, FL
Finley, John M	102	Joplin
Finn, Murray E	190	St. Louis
Finnegan, Joseph V	190	St. Louis
Fischbein, Lewis C	190	St. Louis
Fischer, Edward H	050	Gladstone
Fischer, Heidi	195	St. Louis
Fischer, John R	190	Hermann
Fischer, Robert	190	St. Louis
Fisher, James K	125	Kansas City
Fisher, Linda	190	St. Louis
***Fisher, Robert B**	026	Columbia
Fishman, Norman	190	Chesterfield
Fitch, Coy D	190	St. Louis
Fitz, John R	138	Farmington
Fitzmaurice, Laura S	125	Kansas City
Flance, Israel J	190	St. Louis
Fleer, Gerald K	189	St. Peters
Fleming, Allan R	125	Kansas City
Fleming, David A	046	Moberly
Fleming, J. Will, Jr.	046	Moberly
Fleming, Robert J	189	St. Charles
Fleshman, James W	190	St. Louis
Fletcher, Dale M	002	St. Louis
Fletes, James W	190	St. Louis
Flicker, Michele R	125	Kansas City
Florence, Kerry E	074	Washington
Florendo, Federico N	150	Hannibal
Florendo, Purificacion T	150	Hannibal
Flores, Jhonson E	190	St. Louis
Floro, Kenneth E, Jr.	190	St. Louis
Floro, Mariano N	190	Florissant
Flotte, Sylvester A	190	St. Louis
Floyd, Marla J	082	Springfield
Flug, Eric J	190	St. Louis
Flury, Kirk E	190	St. Louis
Flynn, James M	125	Shawnee Mission, KS
Fogartie, James E, Jr.	050	Kansas City
Fogarty, William M, Jr.	190	St. Louis
Fogel, Steven T	195	Chesterfield
Fogle, Philip R	082	Springfield
Folck, William P	125	Kansas City
Foley, Jonathon K	042	Cape Girardeau
Folkner, Albert L	110	Warrensburg
Follis, Howard W	082	Springfield
Foote, Daniel D	082	Springfield
Foote, Jerry E	026	Columbia
Forand, Joseph M	190	St. Louis
Ford, Lee T	190	Belleville, IL
Ford, Thomas E	190	Niagara Falls, NY
Foreman, Phillip B	150	Hannibal
Forgue, Donald R	125	Kansas City
Forman, Louis H	125	Shawnee Mission, KS
Forsman, Karen E	190	St. Louis
Forsman, Waldo W	190	St. Louis
Forsyth, B. Todd	190	St. Louis
Forsythe, Lees C	125	Shawnee Mission, KS
Forsythe, Robert W	125	Prairie Village, KS
Fortin, Don G	050	Kansas City
Fortin, Jorge A	135	Rolla
Fortner, Sally A	027	Coralville, IA
Fortuna, Randall S	195	Affton
Foss, Jonathan M	190	St. Louis
Foster, R. Steven	178	Sedalia
Fotopoulos, Constantine L	002	Overland Park, KS
Fouts, Dallas B, Sr.	125	Independence
Fowler, Fred D	125	Kansas City
Fowler, I. Charles	050	Sun City Center, FL
Fowler, James W	125	Leawood, KS
Fowler, Marvin L	206	West Plains
Fowler, Wayne L, Jr.	125	Kansas City
Fox, Gerald E	030	St. Joseph
Fox, Robert E	190	Chesterfield
Fox, Thomas J	190	St. Louis
Francel, Thomas J	002	St. Louis
Francis, Roger A	120	Linn Creek
Francisco, Clarence B	125	Shawnee Mission, KS
Francisco, Dominic S	190	St. Louis
Frank, Gael R	125	N. Kansas City
***Frank, Robert A**	125	Independence
Fraser, Daniel M	190	St. Louis

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*Doctor of Osteopathy

Fraser, Victoria J	190	St. Louis
Frawley, Thomas F	190	St. Louis
Frazier, Robert E	026	Columbia
Frazier, Robert L	202	Sikeston
*Frederick, Mark R	058	Jefferson City
Frederick, Raymond O	190	St. Louis
Frederickson, Neil W	190	St. Louis
Freedman, Ruth S	190	Clayton
Freeman, James A	026	Columbia
Freeman, Jerry C	125	Kansas City
Freeman, Mark E	190	St. Louis
Freeman, Michael R	042	Cape Girardeau
Freiden, Floyd J	125	Kansas City
Freiman, Paul C	082	Springfield
Frein, Donald E	214	Harrisonville
Freund, William L	125	N. Kansas City
Frevert, Larry F	125	Kansas City
Frewin, Paul R	082	Springfield
Frey, Jeffrey P	026	Columbia
Fried, John S	125	Overland Park, KS
Friedman, Ira J	074	Washington
Friedman, Michael J	026	Columbia
Friedman, Morris L	125	Shawnee Mission, KS
Friedman, William H	190	St. Louis
Friedrich, Anthony P	190	St. Charles
Friend, T. Gregory	125	Kansas City
Fries, John W	190	St. Louis
Friesen, Randall G	189	St. Charles
Frissell, Dan H, Jr.	174	Ste. Genevieve
Fritsch, Andrew J	102	Joplin
Fritz, William H	190	St. Louis
Fritzlen, Thomas J	125	Overland Park, KS
Froehlich, Thomas W	082	Springfield
Frogge, Jim D	102	Joplin
Frohman, Boris	202	Sikeston
Fromke, Mark K	195	St. Louis
Fromme, Glenn A	082	Springfield
Frumson, Guy H	190	Florissant
Fryer, Dorothy S	190	St. Louis
Fuchs, George J	026	Columbia
Fuhrman, Donald L	125	Leawood, KS
Fuleihan, Farid M	190	St. Louis
Funsch, Robert E	190	St. Louis
Furla, August J	190	St. Louis

G

Gabel, Michael G	190	St. Louis
Gaffney, Laura A	126	Kansas City
Gafford, Franklin H, IV	190	St. Louis
Gagliardo, Joseph	190	St. Louis
Gailey, Raymond K	102	Joplin
Gaines, Robert W	026	Columbia
Gainor, Barry J	026	Columbia
Gaitonde, Mangesh R	026	Lee's Summit
Galakatos, Andrew E	190	St. Louis
Galant, Mark R	125	Belton
Galblum, Larry I	125	Kansas City
Galbreath, Ashford M, Jr.	125	Kansas City
Gale, Arthur H	190	St. Louis
Galindez, Orlando A	126	Kansas City
Gall, Clifford M	125	Kansas City
Gall, Ira C	190	St. Louis
Galvez, Sisenando P	078	Marceline
Gambill, Gary L	190	Chesterfield
Gans, Lawrence A	190	Florissant
Gantz, John A	190	St. Louis
Garcia, Delia M	190	St. Louis
Garcia, Eduardo L	190	St. Louis
Garcia, Kathleen M	190	St. Louis
Garcia-Ferrer, Eduardo A	190	Key Biscayne, FL
Gardner, Joe A	102	Joplin
Gardner, Joseph W	166	Kimberling City
Garfinkel, Bernard T	190	St. Louis
Garner, James H	125	Kansas City
Garner, Royal S	058	St. Petersburg, FL
Garrard, Jacqueline M	190	St. Louis
Garrett, Ted E	190	St. Louis
Garriga, Francisco J	190	Florissant
Garrison, Carla J	082	Springfield
Garrison, David L	030	St. Joseph
Garrison, Roy F	125	Kansas City
Garrison, Theodore W	120	Camdenton
Garrotto, Lewis J	026	Columbia
Garvin, Charles F	190	St. Louis
Gaskin, Fred W	190	St. Louis
Gassman, Ann A	125	Kansas City
Gaston, David A	027	Columbia
Gatapia, Ramilo I	126	Kansas City
Gatchalian, Felicitas Z	190	St. Louis
Gauer, Robert J	050	Kansas City
Gauthier, Charles P	125	Kansas City
Gavankar, Sharad S	102	Joplin
Gavini, Rajendra R	190	St. Louis
Gay, John W	026	Columbia
*Gayle, David R	034	Piedmont
*Gayle, Richard E	034	Piedmont
Gearhart, Wilbur H	190	Chesterfield
Gedney, William B	190	Valley Park
Gehm, Louis E	214	Butler
Gehrke, Jon C	026	Columbia
Geier, David L	082	Springfield
Geier, Larry J	125	Kansas City
Geise, August W	190	Chesterfield
Geisman, Richard A	189	St. Peters
Geisse, Guillermo	190	St. Louis
Gelberman, Richard H	190	St. Louis
Geller, Bruce D	125	Kansas City
Gellman, Elliot F	190	St. Louis
Gelstein, Laurence D	190	St. Louis
Gendel, Jonathan	125	Lee's Summit
Gennaoui, Jad M	190	St. Louis
Gentry, Michael A	082	Springfield
Gentsch, Kenneth W	190	St. Louis
George, Achenklinju K	206	West Plains
Geraghty, Thomas E	125	Kansas City
Gerbarg, Zachary B	002	St. Louis
Gerdes, John A	082	Springfield
Gerdes, K. Eric	082	Springfield
Gerecht, Wolfe B	082	Springfield
Gerhardt, Donald C	026	Columbia
German, David S	190	St. Louis
German, Walter A	082	Springfield
Germann, Donald R	125	Shawnee Mission, KS
Gernstetter, S. L.	034	Poplar Bluff
Gerowin, Lance	190	St. Louis
Gerst, Aloysius C	190	St. Louis
Gessler, James A	082	Springfield
Geter, Rodney K	082	Springfield
Gholkar, Vijay R	125	Kansas City
Ghosh, Nellie	190	St. Louis
Ghosh, Sanjay	074	Washington
Giangiacomo, Joseph	026	Columbia
Gibb, Randall K	190	St. Louis
Gibbons, James J	190	St. Louis
Gibbons, Robert T, Jr.	125	Overland Park, KS
Gibson, David M	125	Santa Fe, NM
Gibson, James D	082	Springfield
Gibson, Merlyn D	026	Columbia
Gibson, Paul H	190	St. Louis
Gibson, William P	190	Chesterfield
Giddings, Frank C	082	Springfield
Gieselmann, James W	034	Poplar Bluff
*Giffen, Lawrence E	058	Jefferson City
Gigantelli, James W	026	Columbia
Gilbirds, William M, II	050	Kansas City
Gilden, Jerome J	190	St. Louis
Gill, Paul J	082	Springfield
Gillbanks, Marjon M	125	Independence
Gilliland, Craig	002	Kansas City
Gilula, Louis A	190	St. Louis
Gimpelson, Richard J	190	Chesterfield

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*Doctor of Osteopathy

Ginardi, Donald E	125	Kansas City
Ginsberg, B. William	125	Kansas City
Ginther, James W, Jr.	190	St. Louis
Giorgi, Lee V	125	Kansas City
Gish, E. R.	038	Fulton
Givler, Robert L	125	Kansas City
Glaser, Larry F	125	Cleveland
Glass, William J	166	Nixa
Glauber, James G	002	St. Louis
Glazer, Harvey S	190	St. Louis
Glazer, Melvin L	125	Kansas City
Glazzard, Charles D	082	Springfield
Glenn, Edward A	150	Louisiana
Glenn, Theodore J	042	Cape Girardeau
Glenski, James A	125	Kansas City
Glines, Michael H	190	Arnold
Glover, David	110	Warrensburg
Glueck, Robert M	125	Kansas City
Gnade, Albert J	190	St. Louis
Gnatz, Steven	026	Columbia
Godar, Sharon A	190	Chesterfield
Godlewski, Krystof J	125	Kansas City
Godwin, Lehman W	082	Springfield
Goebel, Joan M	190	St. Louis
Goebel, Joel A	190	St. Louis
Goeking, C. Keith	030	St. Joseph
Goff, John E	102	Joplin
Goheen, John R	125	Kansas City
Gold, Jonathan A	190	St. Louis
Goldberg, Joseph P	125	Overland Park, KS
Goldenberg, Laurie A	126	Overland Park, KS
Goldkamp, John D	189	St. Charles
Goldman, Arnold M	190	St. Louis
Goldman, Barry C	125	Kansas City
Goldman, Gordon M	190	St. Louis
Goldman, Stanley L	125	Shawnee Mission, KS
Goldring, Sidney	190	St. Louis
Goldsich, Edward	125	Kansas City
Goldstein, David E	026	Columbia
Goldstein, Marcy A	002	St. Louis
Goldstein, Marvin F	125	Kansas City
Goler, Michael R	082	Springfield
***Golfinopoulos, Dimitri**	126	Blue Springs
Goltschman, John P	190	Florissant
Gomez, Cesar A	190	St. Louis
Gondring, William H	030	St. Joseph
Gonzales, Jose H	174	Perryville
Gonzalez, Alicia D	190	St. Louis
Gonzalez-Pina, Roberto	202	Sikeston
Good, Michael W	082	Springfield
Good, Thomas H	125	Kansas City
Goodenberger, Daniel M	002	St. Louis
Goodhope, Karen F	190	St. Louis
Goodman, Douglas E	082	Springfield
Goodman, Gary M	190	Chesterfield
Goodrich, Steven D	190	Florissant
Goodwin, J. Wendall	082	Springfield
Gordon, Bruce J	026	Columbia
Gordon, Glenn L	014	Mexico
Gordon, James M	190	Florissant
Gordon, James S	058	Jefferson City
Gordon, Mark E	050	N. Kansas City
Gose, Don F	082	Springfield
Gosek, Marek J	110	Warrensburg
Gottesman, Gary S	195	Olivette
Gotti, Edward W	082	Springfield
Gottlieb, Charlene C	190	St. Louis
Gottsch, Joseph C	125	Shawnee Mission, KS
Gould, Ronald J	190	St. Louis
Gowda, Manohar Sa	126	Kansas City
Gowda, Siddhesh	190	Chesterfield
Gowdamarajan, Rengasamy	125	Kansas City
Grable, James D	042	Cape Girardeau
Grace, Steve	082	Springfield
Grady, Ronald K	190	Chesterfield
Graff, Joan E	126	Kansas City
Graham, Bruce D	125	Shawnee Mission, KS
Graham, Joseph E	190	St. Louis
Graham, Wallace H	125	Kansas City
Grand, M. Gilbert	190	St. Louis
Grant, John M	190	St. Louis
Grant, Laura L	026	Columbia
Grant, Mark	026	Columbia
Grant, Neville	190	St. Louis
Grant, Ruth	082	Springfield
Grant, William T	190	St. Louis
Gratny, Linda L	002	Leavenworth, KS
Graul, Walter P	190	St. Louis
***Graven, Timothy G**	189	Troy
***Graves, Karladine E**	050	Kansas City
Graviss, E. Richard	190	St. Louis
Gray, Diana L	002	St. Louis
Grebe, T. Keith	102	Joplin
Grechus, John J	138	Farmington
Greditzer, Harry G	190	St. Louis
Green, J. Richard	125	Independence
Green, Morton R	190	Belleville, IL
Green, Thomas F	125	Independence
Green, William R	190	St. Louis
Greenberg, Benjamin E	208	Forsyth
Greenberg, Jeffrey A	102	Joplin
Greene, Harry L	150	Tucson, AZ
Greene, Howard G	150	Louisiana
Greenlaw, Cal W	078	Chillicothe
Greenlund, Nelson C	214	Nevada
Greenspan, Aaron B	190	St. Louis
Greenwood, Kerry L	126	Kansas City
***Greer, Sam T**	102	Joplin
Gregory, Mark H	190	St. Louis
Gregston, J. Leon	082	Springfield
Gresick, Robert J, Jr.	190	St. Louis
Gresick, Robert J	190	St. Louis
Griesbaum, Robert V	190	St. Louis
Griesemer, Bernard A	082	Springfield
Grieshop, Theodore J	042	Cape Girardeau
Griffin, Darrell L	138	Farmington
Griffin, Donald R	002	Kansas City
Griffin, M. E.	066	Springfield
Griffin, Olin A	066	Springfield
Griffin, William T	026	Columbia
Griffith, S. Ken	042	Cape Girardeau
Grim, Edward M	102	Joplin
Grimes, Manning E	030	St. Joseph
Grimes, R. Alan	126	Kansas City
Grimm, Mark E	082	Springfield
Grimm, Mary T	190	Florissant
Grisham, Thomas D	074	Washington
Groce, George D	038	Fulton
Groshong, Ted D	026	Columbia
Grossberg, George T	190	St. Louis
Growdon, John A	125	Shawnee Mission, KS
Grubb, Robert L, Jr.	190	St. Louis
Gruenebaum, Michael I	125	Lenexa, KS
Grunt, Jerome A	002	Kansas City
Guastello, Joseph R	125	Kansas City
Guastello, Mario J	125	Kansas City
Gubin, Barry A	125	Kansas City
Guernsey, Kendra J	002	Lawson
Guerra, Gaston G	125	Kansas City
Guhleman, Henry V	058	Jefferson City
Guillaume, Carole A	126	Kansas City
Gujarati, Subhash B	034	Poplar Bluff
Gulick, C. Richard	190	St. Louis
Gundle, Sigmund	125	Prairie Village, KS
Gunn, Jack	120	Versailles
Gunn, Richard W	125	Kansas City
Gunn, Victoria	058	Jefferson City
Gunn, Walter T	190	St. Louis
Gunnoe, Robert E	125	Kansas City
Gunter, Joe S	030	Columbia
Gunter, Kevin G	178	Sedalia
Gupta, Nilakshi	026	Columbia

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*Doctor of Osteopathy

Gurba, Carol L	Kansas City	125
Gurba, Danny M	Kansas City	125
Gurian, Lawrence E	Springfield	082
Gurucharri, Vincent P	Columbia	026
Gusnard, Debra A	St. Louis	190
Gustafson, Jon E	Lee's Summit	125
Gutek, E. Philip	Kansas City	125
Gutierrez, Anthony C	Kansas City	125
Gutierrez, Ernesto	Florissant	190
Gutknecht, Richard	Independence	125
Guy, Cynthia S	St. Louis	190
Guyer, Emily	Columbia	026
Guyol, William B, Jr.	St. Louis	190
Guze, Samuel B	St. Louis	190
Gwin, Edward	Springfield	082

H

Ha, Richard J	Hannibal	150
Haacke, Linda T	Frontenac	002
Haake, Gregory K	Springfield	082
Haas, Harry D	Blue Springs	125
Haas, Robert W	Liberty	050
Habermann, James H	Joplin	102
Habert, Edward R	Clarkson Valley	190
Habib, Henry N	Osage Beach	120
Hacker, Douglas A	Springfield	082
Hackett, Earl R	Springfield	082
Haddock, James N	St. Louis	190
Haddow, Alastair D	Springfield	082
Haege, Dolph D	Columbia	027
Hafer, Thomas E	Belton	125
Hagan, John C, III	N. Kansas City	050
Hagemann, Margarethe H	St. Louis	190
Hagemann, Paul O	St. Louis	190
Hagen, Douglas W	Kansas City	125
Hagen, Duane Q	St. Louis	190
Hagen, Garrett A	St. Louis	190
Hahn, Bruce H	Lee's Summit	125
Hahn, Frederick W	Independence	125
Hahn, Yoram	Florissant	190
Haight, J. Max	Kansas City	125
Haith, Walter F	Kansas City	125
Halberstadt, Cathanie W	Kansas City	125
Hale, Thomas H	Manchester	190
Halford, Richard M	St. Louis	190
Hall, David G, III	Rocheport	026
Hall, David W	Springfield	082
Hall, Durward G	St. Petersburg, FL	082
Hall, Gary D	Mehlville	190
Hall, John C	Kansas City	125
***Hall, John P**	Cape Girardeau	042
Hall, Robert T	Kansas City	125
Hall, Stanley G	Hannibal	150
Hall, Terry E	Bethany	078
Halloran, Mark J	St. Louis	190
Halpin, Stephen E	Hannibal	150
Halsted, Robert W	Washington	074
Halsted, Teresa M	Washington	074
Halverson, Larry W	Springfield	082
Hamburg, Eric D	Farmington	138
Hamburg, Frederic L	Springfield	082
Hamburg, Mitchell S	Kansas City	125
Hamel, Peter C	Hannibal	150
Hamid, Rashid S	Marshall	198
Hamill, Robert W	Gulfport, FL	125
Hamilton, Caldwell K	St. Louis	190
Hamilton, Dennison R	Overland Park, KS	002
Hamilton, Eugene G	St. Louis	190
***Hamilton, William V**	Lexington	118
Hamilton, William P	St. Louis	190
Hamilton, William P	Aurora	166
Hammerman, Albert M	St. Louis	190
Hammerman, Marc R	St. Louis	190
Hammond, D. Wade	St. Louis	190
Hampton, Bridgette S	Kansas City	126
Hamre, Daniel W	Springfield	082
Hanaway, Joseph	St. Louis	190
***Hancock, Thomas J**	Jefferson City	058
Handler, Fred P	Clayton	058
Handler, Michael R	St. Louis	190
***Handlin, Larry R**	Mexico	014
Hanes, Lily A	Golden Eagle, IL	190
Hanks, Michael S	Springfield	082
Hanley, Thomas P	St. Louis	190
Hanna, Hugh A	Warrensburg	110
Hannas, Ralston R	Kansas City	125
Hansbrough, Eugene T	Poplar Bluff	034
Hansen, Thomas L	Independence	125
Hanson, E. J.	Kansas City	125
Hanson, Jason M	Valley Park	195
Hanson, Karl H	Kansas City	125
Hantz, Oscar	Florissant	190
Hardacre, Ruth A	Kansas City	125
Hardin, William B	St. Louis	190
Harding, Clarke T	Collinsville, IL	189
Hardy, David A	St. Louis	190
Hardy, Guerdan	St. Louis	190
Hardy, H. Malcolm	Shawnee Mission, KS	125
Hardy, Jeffery A	St. Louis	190
Hardy, Patrick J	Florissant	190
Hardy, Samuel W	St. Louis	190
Hardy, Stanton L	Desloge	138
***Hare, Thomas**	Springfield	082
Harell, Alex	St. Louis	190
Hargis, James L	Springfield	082
Hari, Magaral S	Joplin	102
Harless, Morris S	Galena	125
Harlow, Richard J, Jr.	Belton	125
Harmon, Ben C	Springfield	082
Harms, James F	Nevada	214
Harms, Lawrence L	St. Louis	046
Harner, Casper G	San Antonio, TX	030
Harr, Patrick B	Maryville	158
Harris, David J	Kansas City	125
Harris, Hugh G	Springfield	082
Harris, Hugh S, Jr.	Columbia	026
Harris, Lanny W	Kansas City	125
Harris, Louis B	Bolivar	066
Harris, Weldon L	Independence	125
***Harris, William D**	Lenexa, KS	125
Harrison, Garth F	Kansas City	125
Harrison, Thomas J, Jr.	St. Charles	189
Harrison, Winston E	Columbia	026
Harshman, David M	St. Louis	190
Hart, L. Wayne	Shawnee Mission, KS	125
Hart, William G, Jr.	St. Louis	190
Hart, William M, Jr.	St. Louis	190
Hartley, Robert D, II	Edmond, OK	190
Hartman, Paul T	St. Louis	190
Hartman, Richard A	St. Louis	190
Hartman, Rodney C	Sedalia	178
Hartnett, Anna E	St. Louis	190
Hartnett, Thomas D	St. Louis	190
Hartstein, Jack	Chesterfield	190
Hartwig, Frederick H	Kansas City	125
Hartwig, Raymond W	Kansas City	125
Hartzler, Geoffrey O	Shawnee Mission, KS	125
Harvey, Judith E	Springfield	082
Harwell, J. Larry	St. Louis	190
Hassen, Mark A	St. Louis	002
Hassien, Joel D	Hannibal	150
Hata, J. Steven	Columbia	026
Hata, Tara M	Columbia	026
Hatfalvi, Bela I	St. Louis	190
Hatlelid, J. Michael	St. Louis	190
Haulard, Marcel E	St. Louis	195
Haupt, Herbert A	St. Louis	190
Hauptmann, Edward J	St. Louis	002
Hauser, Robert J	Jefferson City	058
Havey, John	Columbia	026
Havlioglu, Necat S	St. Louis	195

---

*Doctor of Osteopathy

Hawatmeh, Abraham S St. Louis	**190**
Hawatmeh, Isam St. Louis	**190**
Hawk, Bray O St. Louis	**190**
Hawkins, Calvin D Springfield	**082**
Hay, Donald P St. Louis	**190**
Haycraft, Gordon L Cape Girardeau	**042**
Hayden, Melvin R Camdenton	**120**
Hayek, Michael E St. Louis	**190**
Hayes, Kimberly W Lee's Summit	**125**
Hayes, Lawrence L Kansas City	**050**
Hayes, Nancy J Mountain Grove	**206**
Hayes, Paul W St. Joseph	**030**
Haynie, William W Butler	**214**
Hazan, Joseph Bridgeton	**190**
Hazen, Robert M Prairie Village, KS	**125**
Hazuka, David F Shawnee Mission, KS	**125**
H'Doubler, Charles Mt. Vernon	**082**
H'Doubler, Francis T Springfield	**082**
H'Doubler, Peter B Springfield	**082**
Headrick, John A Lake St. Louis	**190**
Heath, Jimmy D East Prairie	**202**
Hecker, Joseph E Poplar Bluff	**034**
Hedge, S. Roy Kansas City	**125**
Hedrick, Frances A Holts Summit	**058**
Heeb, Max A Sikeston	**202**
Heilman, M. Kathlyne Springfield	**082**
Heimburger, Elizabeth M Columbia	**026**
Heimburger, Richard A Osage Beach	**058**
Heins, James N St. Louis	**190**
Heinz, George Springfield	**082**
Helfrich, Loring Sikeston	**202**
Helikson, Mary A Columbia	**026**
Hellam, Duane C Springfield	**082**
Heller, Randall L, Jr. St. Louis	**190**
Hellerstein, Stanley Kansas City	**125**
Hellman, Richard N. Kansas City	**125**
Hellweg, Raymond W Florissant	**190**
Helzberg, John H Kansas City	**125**
Hembree, Kathryn A Liberty	**050**
Henderson, Rodney St. Louis	**195**
Hendren, Thomas H Liberty	**050**
Hendrickson, Barry L St. Louis	**002**
Henry, Clarke L Shawnee Mission, KS	**125**
Henry, Clarke L, Jr. N. Kansas City	**125**
Henry, Joseph E Shawnee Mission, KS	**050**
Henry, Lawrence D Columbia	**058**
Henry, Mary M Kansas City	**125**
Henry, R. Beth Kansas City	**125**
Henry, Roy A Springfield	**082**
Henson, Bruce E Kansas City	**125**
Herdoiza, Alfonso W Shawnee Mission, KS	**125**
Herfkens, Kenneth D Springfield	**082**
Herman, Robert L Kansas City	**125**
Hermann, Richard P St. Louis	**195**
Hernandez, J. Humberto Gerald	**074**
Hernandez, Richard P Ellington, CT	**138**
Hernandez, Salvador R St. Louis	**190**
Herrick, Thomas B Kansas City	**050**
Herrmann, Deborah A Marshall	**198**
Herrmann, Joseph G Des Peres	**195**
Hershey, Falls B St. Louis	**190**
Hervey, William H Kansas City	**125**
Herzog, Godofredo M Florissant	**190**
Herzog, Jacques A Chesterfield	**190**
Hesker, Albert E Chesterfield	**190**
Hess, John P St. Louis	**190**
Hess, L. Wayne Columbia	**026**
Hettinger, Brenda A Camdenton	**120**
Heutel, Lee B St. Louis	**190**
Hickey, James L St. Louis	**190**
Hicks, Christina M Fulton	**027**
Hicks, Frederick G St. Louis	**190**
Hicks, Robb R, IV Cape Girardeau	**042**
Hicks, Robert S St. Louis	**190**
Hierholzer, Rebecca S N. Kansas City	**125**
Higgins, Edward F, Jr. Kansas City	**125**
Higgins, Michael D Cape Girardeau	**042**
Higgins, Philip C St. Louis	**190**
Higgins, Ronald A Kansas City	**125**
Higgs, Philip E St. Louis	**190**
Highland, Thomas R Columbia	**026**
Hilbert, Paul H St. Louis	**190**
Hill, Ashley St. Louis	**195**
Hill, Jack H Leawood, KS	**125**
Hill, M. Robert St. Louis	**190**
Hill, Randy C Springfield	**082**
Hill, Ronald T Dexter	**202**
Hill, XaCadene A St. Louis	**190**
Hillard, Alan E Columbia	**026**
Hills, Joe E Springfield	**082**
Hilton, Paul E Joplin	**102**
Himes, Joyce B Springfield	**082**
Hinds, R. David Columbia	**026**
Hindupur, Mohan R St. Joseph	**030**
Hink, Frederick W Independence	**125**
Hinrichs, James H Bridgeton	**190**
Hinson, Gary W Overland Park, KS	**125**
Hintze, Paul F Chesterfield	**190**
Hironimus, John E St. Louis	**190**
Hirsch, John D St. Louis	**002**
Hite, Dennis E Lebanon	**115**
Ho, Judith E St. Louis	**190**
Hoberock, Thomas R Branson	**208**
Hodge, Robert H Kansas City	**050**
Hodgson, Frank H Overland Park, KS	**125**
Hoech, George P, Jr. Kansas City	**125**
Hoehn, John P, III St. Louis	**190**
Hoelscher, Harold F Warrenton	**074**
Hoeman, Michael D Springfield	**082**
Hoeper, Samuel D, Jr. Kansas City	**125**
Hoeper, Samuel D, Sr. Grandview	**125**
Hof, David G Kansas City	**125**
Hoffman, Edward L Kansas City	**125**
***Hoffman, James E** Cape Girardeau	**042**
Hoffman, Leanna M Hamilton	**078**
Hoffman, Mark J St. Louis	**190**
Hoffman, William F St. Louis	**190**
Hoffmann, Alan L Kansas City	**125**
Hoffmann, Lee M Shawnee Mission, KS	**125**
Hoffmann, Ronald E St. Louis	**190**
Hoffmann, Sandra S Chesterfield	**190**
Hofmeister, Roger W Columbia	**026**
Hofstatter, Leopold St. Louis	**190**
Hogan, Cornelius E St. Louis	**190**
Hogan, John R St. Louis	**190**
***Hogan, Patricia E** St. Joseph	**030**
Hogan, Patrick A St. Louis	**190**
Hogan, Patrick C St. Louis	**190**
Hoja, John M Poplar Bluff	**034**
Hoja, W. Alex Poplar Bluff	**034**
***Hoke, Brent K** Warrensburg	**110**
Holand, Roy W Springfield	**082**
Holbrook, C. R., III Kansas City	**125**
Holcomb, John K Cape Girardeau	**042**
Holder, Barrett K St. Louis	**190**
Holder, Thomas M Prairie Village, KS	**125**
Holds, John B St. Louis	**190**
Holekamp, Timothy Columbia	**026**
Holemon, R. Eugene St. Louis	**190**
Holland, Robert D Springfield	**082**
Holleman, David N Kansas City	**125**
Holley, Donald B Springfield	**082**
Hollis, Richard W Springfield	**082**
Hollocher, Richard J St. Louis	**190**
Holloway, Robert B St. Louis	**190**
***Holman, Richard S** Maryville	**158**
Holme, Robert J Farmington	**138**
Holmes, David R Springfield	**082**
Holmes, Nancy E St. Louis	**190**
Holt, Benjamin T Columbia	**026**
Holtmann, Barbel St. Louis	**190**
Holton, Edward B Independence	**125**

---

*Doctor of Osteopathy

Holtz, Alan S St. Louis	190
Holtz, Sumner Chesterfield	002
Holzem, Craig S Washington	074
***Hon, Sarah Jan** Kansas City	126
Honaas, Trygve O Cape Girardeau	042
***Honderick, Richard T** Springfield	082
Honeycutt, Pamela J Columbia	026
Hoos, Gary L Springfield	082
Hooshmand, Ahmad Jefferson City	058
Hopkins, James P Shawnee Mission, KS	125
Hopkins, Thomas A Springfield	082
Hopkins, T. Spencer Hughesville	178
Hopson, David K St. Charles	190
Horan, John J, Jr. St. Louis	190
Horenstein, Simon St. Louis	190
Horine, Jon A Kansas City	125
Horn, Paul C Cape Girardeau	042
Hornbostel, Phillip M Sedalia	178
Horner, John L Ballwin	190
Hornig, Gregory W Kansas City	125
Hornstra, Robijn K Kansas City	125
Horton, Bill G Springfield	082
Horton, James D Springfield	082
Horwitz, Irwin B Clayton	190
Hoskins, R. Bruce Kansas City	125
***Hosley, Brett D** Hannibal	150
Houck, William E Chesterfield	190
Houghton, Howard L Kansas City	125
Houttuin, Erik Washington	106
Hover, Alexander R Springfield	082
Howard, Campbell P Kansas City	125
Howard, Todd K St. Louis	190
Howell, Billy D Brookfield	078
Howell, David T Florissant	002
Hoxworth, Gerald M Belle	014
Hoye, Robert C Ste. Genevieve	174
Hrabik, Brent Tarkio	158
Hruza, George J St. Louis	190
Hruza, Luciann L St. Louis	002
Hu, Raymond J St. Peters	189
Hubbard, John D Kansas City	125
Hubbard, Kathryn R Sedalia	178
Hubbard, Sally L Springfield	082
Hubbell, George P Osage Beach	120
Hubbell, Marius M, Jr. Kansas City	125
Huber, Kenneth C Kansas City	125
Hubert, John W Bridgeton	190
Huck, Richard F, Jr. St. Louis	190
Huddleston, Charles B St. Louis	190
Hudgens, Richard W St. Louis	190
Hudson, Randall B Kansas City	125
Huewe, Douglas A Springfield	082
Huff, Kalaichelvi R Joplin	102
Huffaker, William H Chesterfield	190
Huffman, Larry Branson West	208
Huggins, Albert M St. Louis	190
Hughes, Derek Columbia	026
Hughes, Michael F Kansas City	125
Hughes, Robert G St. Louis	190
Huk, Stephen G Kansas City	050
Hulbert, Laura R St. Louis	190
Hull, Timothy A Kansas City	125
Hulstra, Johannes F Springfield	082
Hummel, Anton J St. Louis	190
Humphrey, James D Mound City	158
Humphrey, Paul W Columbia	026
Humphreys, Edward T Boonville	026
Humphreys, William St. Joseph	030
Hunkeler, John D Kansas City	125
Hunleth, Frank E St. Louis	190
Hunsley, Perry U Hollister	208
Hunt, Robert S Cape Girardeau	042
***Hunter, Harlen C** Chesterfield	190
Hunter, James K, Jr. Fairfax	158
Hunter, Leslie M Ft. Leonard Wood	135
Hunzicker, Warren J Kansas City	125
Hurley, Joseph J St. Louis	190
Hurly, Michael P Joplin	102
Husain, Shakira Kansas City	126
Huse, William J, II Kansas City	125
Huss, Randall D Rolla	135
Husted, Frederick C Springfield	082
Huster, Robert M Liberty	135
Huston, Kent A Kansas City	125
Hutchinson, William B St. Louis	190
Hyatt, Robert W Jefferson City	058

I

Iacobucci, John J St. Louis	002
Ibrahim, Jihad (Joe) Y Salem	135
Icaza, Ramiro Jackson	042
Ide, Carl H Columbia	026
Idstrom, Mark E Kansas City	125
Imes, Elvin D Columbia	026
Ingham, Walton C Shawnee Mission, KS	125
Ingram, Donald R Festus	190
Ingram, Ellis A Columbia	026
Inman, Max M Chesterfield	190
Inniss, Rosalyn E Kansas City	125
Inocentes, Fe A O'Fallon	189
Ip, Aidan W St. Louis	190
Ippensen, John H Springfield	082
***Irinyi, Elmer T** Gower	030
Irvin, William S Columbia	026
Irwig, Fred Prairie Village, KS	125
Isaac, Anita M Springfield	082
***Isaacs, Victor E** Scott City	042
Ishida, Yasuo St. Louis	190
Itoku, Kendall Chesterfield	190
Ivins, Gregory K Fulton	038
Iwane, Akira Chesterfield	190
Izmirlian, Grant St. Louis	190

J

Jaax, Jeffrey D Kansas City	125
Jablonski, Raymond C St. Louis	190
Jackson, Darwin C Florissant	190
Jackson, Dorothy J Gladstone	125
Jackson, Jay A Kansas City	125
Jackson, Mary Ann Kansas City	125
Jackson, Max G Kansas City	125
Jackson, Roger P Kansas City	050
Jackson, Vernon B Fulton	038
Jacob, Joe Columbia	026
Jacob, Karl A St. Louis	190
Jacobs, Donald L St. Louis	002
Jacobs, Morton Overland Park, KS	125
Jacobs, Walter H Kansas City	125
Jaeger, Joseph N Jackson	042
Jaffe, Mark R Kansas City	126
Jafri, Syed F Columbia	027
Jahanian, Iraj Springfield	082
Jain, Poonam St. Louis	190
Jain, Sangeeta Jefferson City	058
Jain, Savitri G St. Louis	190
Jain, Sumer C St. Louis	190
Jakoby, Michael G, IV St. Louis	195
Jamal, Ayman Kansas City	126
Jamaluddin, Mohideen A Festus	106
James, Elizabeth J Columbia	026
James, Kathleen M St. Charles	189
James, Otis E Shawnee Mission, KS	125
James, Ronald C Columbia	026
Jameson, James E Springfield	082
Jamison, Kimberly Columbia	026
Jamroz, Greg A Washington	074
Janeczko, Gregory F Springfield	082
Janney, Stephen K St. Louis	190
Jantsch, Deborah A Kansas City	125
Jantz, Keith Kansas City	125

---

*Doctor of Osteopathy

Jarka, Dale E	125	Kansas City
Jarvis, Cathy C	190	Florissant
Javdan, Ron	190	St. Louis
Jayamanne, Damasus S	058	Jefferson City
Jedlinski, Michael T	042	Cape Girardeau
Jefferis, Kenneth R	158	Maryville
Jeffries, Joel T	026	Columbia
Jelley, V. Carl	125	Blue Springs
Jenkins, David C	125	Kansas City, KS
Jenkins, Edward R	135	Waynesville
Jenkins, James J	190	St. Louis
Jennett, J. H.	125	Kansas City
Jennett, Richard B	058	Jefferson City
Jensen, Joshua E, II	190	St. Louis
Jernstrom, Vance R	125	Kansas City
Jessup, Michael J	042	Cape Girardeau
Jewell, Gregory L	002	St. Louis
Jimenez, David F	026	Columbia
Joachims, Brian V	126	Kansas City
Jobe, Charles L	082	Springfield
Johar, Ravi S	190	St. Louis
Johnson, C. L.	125	Kansas City, KS
Johnson, Charles J	190	St. Louis
Johnson, Dallas A	125	Overland Park, KS
Johnson, Earl W	042	Cape Girardeau
Johnson, Eric J	002	Chesterfield
Johnson, Frank E	190	St. Louis
Johnson, Fritz M	082	Springfield
Johnson, Gareth R	125	Independence
Johnson, Garry A	190	Des Peres
Johnson, Glen E	190	St. Louis
Johnson, Gordon L	106	Festus
Johnson, James S	125	Kansas City
Johnson, Jeffrey R	082	Springfield
Johnson, Jonathan H	034	Poplar Bluff
Johnson, Joseph C, Jr.	082	Springfield
Johnson, Joseph E	125	Kansas City
Johnson, Lent C	150	Hannibal
Johnson, Lenworth N	026	Columbia
Johnson, Patrick E	138	Farmington
Johnson, Randy G	190	St. Louis
Johnson, Rebecca S	125	Kansas City
Johnson, Richard L	125	Kansas City
Johnson, Robert D	082	Springfield
Johnson, Steven M	190	St. Louis
Johnson, Thomas M	125	Shawnee Mission, KS
Johnson, Warford B, Sr.	082	Springfield
Johnson, Warford B, II	082	Springfield
Johnson, Warren L, Jr.	125	Kansas City
Johnston, Richard	190	St. Louis
Johnstone, John T	190	St. Louis
Jolly, Ben L	014	Mexico
Jolly, Benjamin N	014	Mexico
Jonas, Harry S	125	Chicago, IL
Jones, Bruce N	190	Chesterfield
Jones, Edward S	214	Overland Park, KS
Jones, Gale O	125	Kansas City
Jones, Georgia A	190	St. Louis
Jones, Gordon	202	Sikeston
Jones, Harold L	082	Springfield
Jones, Jace S	082	Springfield
Jones, Jeffrey T	102	Joplin
Jones, Laird E	082	Springfield
Jones, Lowry, Jr.	125	Kansas City
Jones, Maynard C, Jr.	125	Lee's Summit
Jones, Michael D	014	Mexico
Jones, Paul S	102	Joplin
Jones, Randall W	125	Independence
Jones, Richard A	190	St. Louis
Jones, Robert W	206	West Plains
Jones, Robert P	125	Blue Springs
Jones, Robert R	214	Nevada
Jones, Robin R	026	Columbia
Jones, T. Reid	125	Prairie Village, KS
Jones, Timothy R	190	St. Louis
***Jordan, Earl L, Jr.**	102	Joplin
Jorgensen, Eric D	026	Columbia
Jose, Manuel C	125	Kansas City
Joseph, Harold J	190	St. Louis
Joshi, Surekha K	190	St. Louis
Joslyn, Harold L	190	Mt. Vernon, IN
Jost, Charles A	190	N. Ft. Myers, FL
Jotte, Richard P	190	St. Ann
Jotte, Richard F	190	St. Louis
***Joubert, Paul M**	125	Lee's Summit
Joyce, Jeffrey T	125	Kansas City
Joyce, Rex M	125	Kansas City
Joyce, Steven T	125	Kansas City
Judd, Donald R	190	St. Louis
Judd, Jeffrey B	190	St. Louis
Judge, Mark A	102	Seattle, WA
Judge, Steven J	074	Washington
Judy, Joseph D	026	Beloit, WI
Juergens, William G	190	St. Louis
Julien, Rene	190	Centreville, IL
Jung, Christopher H	042	Cape Girardeau
Jung, J. Marshall	042	Cape Girardeau
Junker, James A	106	St. Louis
Justus, John B	125	Shawnee Mission, KS

K

Kahn, Joseph A	189	St. Charles
Kahn, Marvin	125	Kansas City
***Kaine, Louise M**	126	Shawnee Mission, KS
Kairuz, Bartolome C	190	St. Louis
Kaiser, George C	190	St. Louis
Kakaiya, Dilip H	070	Kennett
Kakaiya, Ram M	002	St. Louis
Kallenbach, Glen P	014	Mexico
Kamakas, Nicholas C	190	St. Louis
Kamath, K.P.S.	042	Cape Girardeau
Kamenetzky, Stephen A	190	St. Louis
Kanagawa, Harold K	058	Jefferson City
Kanarek, Joseph	125	Kansas City
Kang, Juan	190	St. Louis
Kang, Min S	126	Lenexa, KS
Kang, Young M	206	West Plains
Kanlic, Enes M	002	Creve Coeur
Kanne, Marty A	050	Kansas City
Kantor, Julius M	125	Mission Hills, KS
Kantor, Owen	190	St. Louis
Kantor, Samuel	125	Englewood, CO
Kaplan, Alex H	190	St. Louis
Kaplan, Henry J	190	St. Louis
Kaplan, Michael F	026	Columbia
Kapp, Dave	174	Perryville
Kapp, William K, III	190	Bridgeton
Kappesser, Netajean G	190	St. Louis
Kappesser, Roland C	190	St. Louis
Kardesch, Milton	190	St. Louis
Karges, Melvin D	125	Kansas City
Karl, Michael M	190	St. Louis
***Karr, Jerry L**	042	Cape Girardeau
Karraker, Alvan G	138	Farmington
Karsh, Robert S	190	St. Louis
Kartus, Irving	125	Shawnee Mission, KS
Kass, Michael A	190	St. Louis
Kasten, Mark C	042	Cape Girardeau
Kasten, Melvin C	042	Cape Girardeau
Katf, Nicola Y	050	N. Kansas City
Katsantonis, George	190	St. Louis
Kauffman, Ruth	120	Versailles
Kaufman, Andrew B	125	Kansas City
Kaufman, Bruce A	190	St. Louis
Kaufman, Robert L	190	St. Louis
Kaufmann, Herbert H	125	Kansas City
Kauk, Bruce A	050	N. Kansas City
Kaup, Chandra S	190	Florissant
Kayanan, Jose C	125	Kansas City
Kayes, Jack	190	St. Louis
Kays, Kenneth M	046	Osage Beach

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*Doctor of Osteopathy

Keairnes, Harold W	125	Kansas City
Keay, Myoung So	078	Chillicothe
Keefe, David M	189	St. Charles
Keeler, Jared N	126	Kansas City
Keesal, Dennis	189	St. Charles
Keitges, Pierre W	125	Overland Park, KS
Keller, Barbara P	026	Columbia
Keller, Maurice J	190	St. Louis
Keller, Robert M	189	Wentzville
Keller, Stephen M	190	St. Louis
Kellett, John G	190	St. Louis
Kelley, Gilbert B	010	Savannah
Kelling, E. Collyer	082	Springfield
Kelly, Charles R	125	Kansas City
Kelly, James B	125	Kansas City
Kelly, John B	102	Joplin
Kelly, John J	190	St. Louis
Kelly, Joseph G	050	N. Kansas City
Kelly, R. E.	190	St. Louis
Keltner, Raymond M, Jr.	190	St. Louis
Keltner, Raymond O	125	Peculiar
Kemp, Michele E	190	Chesterfield
Kendall, Forrest H	125	Kansas City
Kendis, Joseph B	190	St. Louis
Kenneally, Cynthia Z	190	St. Louis
Kennedy, David G	190	St. Louis
Kennett, Jerry D	026	Columbia
Kenney, Douglas R	086	Clinton
Kenney, John D	190	St. Louis
Kenney, John D, III	125	Overland Park, KS
Kenney, Roy E	166	Neosho
Kensel, Robert S	082	Springfield
Keohane, Mark	189	St. Charles
Kerkemeyer, George	150	Hannibal
Kerr, Harold H	125	Shalimar, FL
Kessel, James W	190	St. Louis
*Kesseler, Randall G	082	Springfield
Kessler, William D, Jr.	102	Joplin
Kester, Nathan L	082	Springfield
Ketcherside, W. Joseph	050	N. Kansas City
Key, James S	082	Springfield
Khalil, Tamer G	082	Springfield
Khan, Abdul G	190	Arnold
Khan, Altaf A	190	St. Louis
Khan, Khalid I	042	Cape Girardeau
Khan, Khawla B	002	St. Louis
Khojasteh, Ali	026	Columbia
Khojasteh, Saaid	002	St. Louis
Khouri, Roger K	190	St. Louis
Khoury, Cecile S	125	Leawood, KS
Khurana, Satish K	125	Lenexa, KS
Kiburz, Douglas W	178	Sedalia
Kichura, George M	190	St. Louis
Kies, Richard L	042	Cape Girardeau
Kilbride, Howard W	125	Kansas City
Kilgore, John W	190	St. Louis
Killen, Duncan A	125	Kansas City
Kim, Chul	034	Poplar Bluff
Kim, Stanley W	190	St. Louis
Kim, Tae S	106	Crystal City
Kim, William W	190	St. Louis
Kim, Yang H	074	Washington
Kim, Yong Ki	042	Cape Girardeau
Kimelman, Nathan	190	St. Louis
Kimlinger, William R	058	Jefferson City
Kincaid, William L	190	St. Louis
Kinder, Doyle O	082	Springfield
Kinder, James A	042	Cape Girardeau
Kinder, Jerry L	042	Cape Girardeau
Kindred, Lynn H	125	Kansas City
King, Dana M, III	030	St. Joseph
King, Donald K	190	St. Louis
King, Eustace E, III	190	Chesterfield
King, Francis C	190	St. Louis
King, Frank K	170	Hayti
King, Gregory S	190	St. Louis
King, J. Tenbrook	125	Prairie Village, KS
King, James A	002	St. Louis
King, John V, Jr.	190	Bridgeton
King, John V, Sr.	190	St. Louis
King, M. Kenton	190	St. Louis
King, Richard H	086	Clinton
Kingsbury, Robert J	189	St. Peters
Kingsland, Robert C	190	Sarasota, FL
Kinsella, Edward D	190	St. Louis
Kinsella, Peter W	190	St. Louis
Kinsella, Ralph A, Jr.	190	St. Louis
Kipfer, Robert E	082	Springfield
Kipnis, David M	190	St. Louis
*Kirila, Carol E	126	Kansas City
Kirkland, Jerry A	050	Kansas City
Kirsch, Jeffrey P	190	St. Louis
Kissane, John M	190	St. Louis
Kissel, John H	190	St. Louis
Kissell, Richard W	082	Springfield
Kister, George E	189	Maryland Heights
Kistler, W. David, Jr.	190	St. Louis
Kitchen, Alice D	190	St. Louis
Kitchin, Winston H	190	St. Louis
Kiyanclar, M. Emin	190	St. Louis
Klachko, David M	026	Columbia
Klearman, Micki	190	St. Louis
Klein, Kendel L	166	Mt. Vernon
Klein, Saul J	190	St. Louis
Kleinschmidt, Donn C	190	St. Louis
Kleopfer, Lynn L	026	Columbia
Kletzker, George R	190	St. Louis
Kline, Carlyn M	030	St. Joseph
Kline, Edmund W	030	St. Joseph
Kline, James	030	St. Joseph
Klinkerfuss, George H	082	Springfield
Klippel, Allen P	190	St. Louis
Knabb, Henry F, Jr.	082	Springfield
Knabb, Kenneth E	082	Springfield
Knakal, Roger C	002	Kansas City
Knapp, Jane F	125	Kansas City
Knight, Franklin P	190	St. Charles
Knight, James W	190	St. Louis
Knight, William A, Jr.	190	St. Louis
Knipschild, Bedford F	198	Marshall
Knoch, H. Kermit	125	Shawnee Mission, KS
Knock, Henry L	190	St. Louis
Knopf, Harry L	190	St. Louis
Knowles, R. Raymond	190	Webster Groves
Knowlton, Norman P, III	082	Springfield
Knudson, Dennis R	026	Columbia
Kobbermann, Kobby J	082	Springfield
Kodner, Ira J	190	St. Louis
Koehler, George A	190	St. Louis
Koenig, Marvin I	190	St. Louis
Koerner, Kenneth A	190	St. Louis
Kofkoff, Richard L	190	Bridgeton
Koh, David W	195	St. Louis
Kohler, Roy	082	Springfield
Kohm, Daniel G	190	St. Louis
Koivunen, Debra G	026	Columbia
Kolb, Lisa G	058	Jefferson City
Kolda, Michael A	042	Cape Girardeau
Kolker, Allan E	190	St. Louis
Kolze, Vernon W	082	Springfield
Komes, Kevin D	102	Joplin
Koo, Michele D	190	St. Louis
Koon, Benny H	066	Bolivar
Koonce, John P	058	Jefferson City
Koontz, Kenneth L	125	Kansas City
Koontz, Paul G	125	Kansas City
Kopelson, Jeffrey C	190	Brewester, NY
Kopp, Kenneth R	125	Lenexa, KS
Kopp, Shelby K	190	St. Louis
Korenblat, Phillip E	190	St. Louis
Korenfeld, Michael S	074	Washington
Korn, Robert L	190	St. Louis

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*Doctor of Osteopathy

Kosse, Karl E	030	St. Joseph
Kossoy, Kent I	002	St. Louis
Kotner, Lawrence M, Jr.	190	St. Louis
Kouchoukos, Nicholas T	190	St. Louis
Kouo, Louis	042	Cape Girardeau
Kovac, S. Robert	190	Dayton, OH
Kowert, Edward H	190	St. Louis
Kozminski, Mike	030	St. Joseph
Krabak, Michael J	195	St. Louis
Kraeger, Russell R	190	St. Louis
Kraemer, Bruce A	190	St. Louis
Kraetsch, Robert E	190	Eureka, CA
Kraft, Jacob	125	Palm Springs, CA
Krahn, Henry C	082	Springfield
Krahn, Michael J	050	Kansas City
Krain, Samuel	190	St. Louis
Krajcovic, David P	190	Chesterfield
Kramer, Robert S	190	St. Louis
Kraner, Justin F	190	St. Louis
Kranson, Seymour J	125	Guilford, CT
Kratz, Donald P	082	Springfield
Kraus, Frederick T	190	St. Louis
Krause, G. Lynn, Jr.	190	Chesterfield
Krautmann, John J	058	Jefferson City
Kraybill, William G	190	St. Louis
Krebs, Festus J, III	125	Kansas City
Krechel, Susan W	026	Columbia
Kreski, Kenneth C	190	House Springs
Kretchmar, Alan P	190	St. Louis
Krettek, John E	190	Chesterfield
Kreusser, Katherine L	190	St. Louis
Krewet, Frank A, III	190	St. Louis
Kriegshauser, James W	190	St. Louis
Kriegshauser, Lawrence A	190	St. Louis
Krishna, Padma	125	Kansas City
Kroeger, George B, Jr.	190	St. Louis
Kroetz, Frank W	202	Sikeston
Krojanker, David N	190	St. Louis
Krojanker, Rolf J	190	St. Louis
Kromer, Charles J	190	St. Louis
Kronemer, Keith A	195	New Orleans, LA
Kronemer, Norton S	190	St. Louis
Krug, Paul E	125	Kansas City
Krummenacher, Thomas K	190	St. Louis
Kruse, Carl R	150	Palmyra
Kryshak, Edward J	082	Springfield
Kuangparichat, Manoch	118	Excelsior Springs
Kuckelman, Richard G	125	Kansas City
Kuebel, Richard J	190	St. Louis
Kuehn, Nicolaus J	126	Kansas City
Kuenzi, Donald E	050	Kansas City
Kuganeswaran, Eliathamby	126	Kansas City
Kuhlman, Ralph F	190	St. Louis
Kuhlman, Robert E	190	St. Louis
Kuhn, Lawrence F	190	Bridgeton
Kulak, Gary	190	St. Louis
Kulick, Eric M	125	Prairie Village, KS
Kulkarni, Nandini S	190	St. Louis
Kulkarni, Satish R	189	Town & Country
Kumari, Vijaya	190	St. Louis
Kunin, Jeffrey R	125	Kansas City
Kunst, Edward J	190	Ballwin
Kunz, Stephen R	125	Overland Park, KS
Kurtz, Karl J	125	Kansas City
Kussman, Mary E	002	St. Louis
Kutka, Lori J	195	St. Louis
Kyger, John E	125	Independence

L

Laatsch, Robert H	034	Poplar Bluff
LaBach, James P	125	Overland Park, KS
Labayen, Ricardo A	125	Overland Park, KS
Lacey, Hugh L	102	Joplin
LacKamp, Robert J	030	St. Joseph
Ladd, Charles B	190	St. Louis
LaDriere, Raymond J	190	St. Louis
LaFerriere, Keith A	082	Springfield
LaFoe, William K	042	Cape Girardeau
LaFrancis, Irving E	102	Joplin
LaHue, William C	118	Lexington
Laiben, Gregg R	125	Kansas City
Laird, John M	190	St. Louis
Lakusiewicz, Ronald J	034	Poplar Bluff
Lally, James J	125	Kansas City
Lamb, Jerome P	125	Blue Springs
Lamb, Wanda	190	St. Louis
Lamberti, Joseph W	026	Columbia
Lambie, Rodger W	125	Kansas City
Lammoglia, Francisco J	030	St. Joseph
LaMonda, Gary W	026	Columbia
Lampert, Benjamin A	082	Springfield
Lamping, J. Daniels	190	St. Louis
Lampros, William P	190	St. Louis
Lampton, Lawrence M	026	Columbia
Landau, David W	190	St. Louis
Landau, William M	190	St. Louis
Lander, Robert C	190	St. Louis
Landers, Burnell	125	Independence
***Landers, Gary A**	050	N. Kansas City
Landgraf, James R	125	Independence
Landhuis, Leo R	026	Columbia
Landis, George K	125	Raymore
Landman, Danielle	002	University City
Landrum, Alice L	026	Columbia
Landsbaum, Charles J	058	Jefferson City
Lane, Daniel K	190	St. Louis
Lang, John J	190	St. Louis
Lange, David R	190	Bridgeton
Langley, Harriet S	125	Kansas City
Lankachandra, Bharata	010	Savannah
Lankford, Harold D	014	Mexico
Lapi, Angelo	125	Boca Raton, FL
Laposky, Lynda L	190	Chesterfield
Larsen, William E	125	Shawnee Mission, KS
Larson, Kenneth W	082	Springfield
Laster, Jerry L	102	Joplin
Lastra, Carlos R	026	Columbia
Latham, Raymond W	125	Mission Hills, KS
Latif, Azhar	118	Lexington
Latimer, Walter N	050	Gladstone
Lattinville, Henry E	190	Bridgeton
Lauber, Joseph J	190	St. Louis
Lauer, Daniel J	125	Overland Park, KS
Lauer, John D	190	St. Louis
Laughlin, Edward J	125	Independence
Laughlin, Thomas P	125	Kansas City
Launius, Gregory D	190	St. Louis
Laux, France A	190	Tucson, AZ
Lavery, Daniel P	058	Westphalia
Lawrence, Willie E, Jr.	125	Kansas City
Lawson, Noel W	026	Columbia
Lawton, John T	190	St. Louis
Le, Phi-Nga Min	126	Kansas City
Leary, Daniel J	190	St. Louis
LeBlanc, Leo J	190	Clayton
Lederer, Charles M, Jr.	125	Kansas City
Lederer, Charles M, Sr.	110	Warrensburg
Lednicky, Jay A	125	Lee's Summit
Lee, David Y	042	Cape Girardeau
Lee, Fransiska A	190	St. Louis
Lee, Gerald B	214	Kansas City
Lee, H. T.	026	Columbia
Lee, Henry A	125	Snowmass Village, CO
Lee, Jung H	106	Crystal City
Lee, King Y	125	Shawnee Mission, KS
Lee, Leander K	190	St. Louis
Lee, Susan L	125	Kansas City
Lee, Tae H	125	Leawood, KS
Lee, Wilfred	042	Cape Girardeau
Leech, Maurice P	026	Fayette
Leeper, Sidlee W	026	Rocheport

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*Doctor of Osteopathy

LeFevre, Philip J	Springfield	082
Legarda, Maria M	Kansas City	125
Legler, Larry E	Independence	125
Lehman, Richard C	St. Louis	190
Lehman, Robert B	St. Louis	190
Leibsohn, Joel M	Independence	125
Leicht, Craig H	St. Louis	002
Leidenfrost, Ronald D	Chesterfield	190
Leifer, Gary	Kansas City	125
Leifer, William W	Kansas City	125
Leightner, William F	St. Louis	190
Leitch, Steven M	Springfield	082
Lemery, Robert	Kansas City	125
Leming, Bert H	St. Louis	190
Lennard, Ted A	Springfield	082
Lenobel, Milton I	Longboat Key, FL	190
Lents, Rickey L	Cape Girardeau	042
Lentz, Harold C	Neosho	166
Lentz, Harold C, Jr.	Independence	125
Lentz, Kathy J	Washington	074
***Lentz, Rodney D**	Jefferson City	058
Lenzenhuber, Karl J	Washington	074
Leonhardt, Erwin M	St. Louis	190
Lepkowski, Hemlata K	Columbia	026
Lerner, Bruce	Independence	125
Lerner, Scott A	Kansas City	125
Leroux, Gene H	Doniphan	034
Lerwick, Everett R	St. Louis	190
Leslie, James T	Jefferson City	058
Letizia, Wayne L	Independence	125
Levenson, Ernest	Poplar Bluff	034
Levenson, Ina	Poplar Bluff	034
Levi, Bernard	Kansas City	125
Levine, Laurence A	St. Charles	190
Levine, Richard S	St. Louis	190
Levitt, Joseph	St. Louis	190
Levitt, Robert G	St. Louis	190
Levy, Edward S	St. Louis	002
Levy, Jerome F	St. Louis	190
Levy, Morton A	St. Louis	190
Lewin, W. Howard	St. Louis	190
Lewis, J. Eugene	St. Louis	190
Lewis, Lawrence M	St. Louis	190
Lewis, Matthew T	Jefferson City	058
Lewis, Noel R	Springfield	082
***Lewis, Randall W**	High Ridge	002
Lewis, Revis C	Kansas City	125
Lewis, Robert D	St. Louis	190
Liang, Jing C	Independence	125
Libel, Roy D	Springfield	082
Librach, Stanley L	Westwood Hills, KS	126
Lichtor, Joseph M	Kansas City	125
Lichty, Charles A	Shelbina	150
Lieb, Francis X	St. Louis	190
Lieb, Thomas F	St. Louis	190
Lieberman, David M	St. Louis	190
Lierz, Mark F	St. Joseph	030
***Light, Diane L**	Jefferson City	058
Lila, Aram	Excelsior Springs	050
***Lillig, James F**	Kansas City	050
Lilly, Douglas R	St. Louis	190
Lim, Piemsak	St. Louis	190
Lima, Jose A	St. Louis	190
Limpiphiphatn, Dhajphong	Perryville	174
Limpiphiphatn, Ester P	Perryville	174
Lin, C. H.	Moberly	046
Lin, Chi-Hsi	Springfield	082
Lin, H. T.	Moberly	046
Lin, Hsiu-San	St. Louis	190
***Lind, Diana M**	Roeland Park, KS	126
Linde, John W	Rolla	135
Lindeman, John F	Chesterfield	190
Lindgren, Carleton J	Independence	125
Link, Alexander J	St. Louis	190
Link, Vance E	Independence	125
Linsenmeyer, Charles M	St. Charles	189
Lintecum, Frederick B	Kansas City	125
Linville, Howard E	Shawnee Mission, KS	125
Lipschitz, Ervin	St. Louis	190
Lipsitz, Ellis S	Chesterfield	190
Lisbon, Eleanor A	Kansas City	125
Lischwe, Daniel H	Bridgeton	190
Liss, Jay L	St. Louis	190
Littlejohn, Robert T	N. Kansas City	050
Litton, Lyle D	Boca Raton, FL	082
Litton, Lynn O	Boca Raton, FL	026
Litzow, Peter L	St. Louis	190
Liu, Ben C	Kansas City	125
Llana, Angelo A	St. Joseph	030
Llorens, Alfred S	Columbia	026
Lobati, Frederick	Kansas City	126
Lobdell, Creig M	Springfield	082
Lockard, Orlyn O	St. Joseph	030
Lockhart, Charles E	Springfield	082
Lockwood, Gary F	Kansas City	125
Loeb, Mark	Columbia	026
Loeb, Richard H	Springfield	082
Loeb, Virgil, Jr.	St. Louis	190
Loeffel, Ellen S	St. Louis	190
Loeffler, Roberta L	St. Louis	190
Loeppky, Carol B	Columbia	026
Lofgreen, Craig S	Kansas City	002
Loftus, Loretta S	Kansas City	125
Loggan, Michael B	Liberty	050
Logie, Macdonald B	St. Louis	190
***Logston, David G**	Springfield	082
Logue, John T	Columbia	026
Lohmar, Roland E	Columbia	026
Lohr, Robert W	St. Louis	190
Lohrentz, Lois H	Shawnee Mission, KS	125
Loitman, Bernard S	St. Louis	190
Lombardo, Joseph A	St. Louis	190
Londe, Alan M	St. Louis	190
Londe, Sol	Northridge, CA	190
London, Stanley L	St. Louis	190
Lonergan, James H	Kansas City	125
Lonergan, Warren M	Chesterfield	190
Long, Curtis W	Butler	214
Long, Edwin T	Columbia	026
Long, Frank B	Chesterfield	190
Long, John W	Columbia	026
Long, Priscilla E	Hannibal	150
Long, R. Stacy	Kansas City	125
Long, Stephen E	Springfield	082
Long, Timothy P	Marthasville	074
Long, W. Steven	St. Joseph	030
Lonsway, Maurice J, Jr.	St. Louis	190
Look, Dwight C, III	Fenton	002
Loomis, James F	St. Louis	190
Looney, Steven C	St. Joseph	030
Lopez-Plata, Roberto	Shawnee Mission, KS	125
Lord, Richard E	St. Louis	190
Lorei, John M	Parkville	002
Loren, Michael L	Independence	125
Lorenc, Ernest	Springfield	082
Lottes, J. Otto	St. Louis	190
Loughead, John R	Poplar Bluff	034
Loutzenhiser, James K	Kansas City	125
Love, Gerry A	Liberty	125
***Loveland, Richard D**	Hollister	208
***Lovern, Royce E**	Washington	074
Lovinger, Warren C, Jr.	Nevada	214
Lovinggood, J. Perry	Bridgeton	190
Lovinggood, Thomas A	Cape Girardeau	042
Lowe, Alvin L	Sedalia	178
Lowe, H. Arch, Jr.	Springfield	082
Lowell, Jeffrey A	St. Louis	190
Loyd, Earl L	Holts Summit	058
Loynd, Robert C	St. Louis	190
Lubniewski, Anthony J	St. Louis	190
Lubowitz, Herbert	St. Louis	190
Luby, Maureen T	St. Louis	195

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*Doctor of Osteopathy

Lucas, Thomas G	190	St. Louis
Luckenbill, Paul T	054	Park Rapids, MN
Ludwig, Mark A	190	St. Louis
Ludwikosky, Mikel A	125	Lee's Summit
Luechtefeld, Frank	190	Florissant
Lueckenhoff, Rebecca R	058	Jefferson City
Luerding, Jeffrey A	050	Kansas City
Luetje, Charles M	125	Kansas City
Luetkemeyer, Dennis C	027	Columbia
Luetkemeyer, James G	026	Columbia
Lugo, Samuel	190	St. Louis
Luh, Andrew M	190	St. Louis
Lukavsky, James P	208	Branson
Lumpkin, Elizabeth N	027	Columbia
Lunberry, Julia J	027	Columbia
Lund, Herluf G	190	St. Louis
Lund, Herluf G, Jr.	190	Chesterfield
Lundman, Hugh	082	Springfield
Lurie, Harold H	082	Springfield
Lusk, Charles A	214	Butler
Luther, George A	190	St. Louis
Lutkewitte, Joseph F	174	Ste. Genevieve
Luzecky, Michael H	082	Springfield
Lyddon, Harold R, Jr.	125	Kansas City
Lyle, Robert R	120	Versailles
Lyles, Rodney	125	Overland Park, KS
Lyman, Edward H	190	St. Louis
Lynch, Thomas W	082	Springfield
Lyon, David B	125	Kansas City
Lyons, Daniel F	082	Springfield
Lyskowski, John C	058	Jefferson City
Lyskowski, Maria M	058	Jefferson City
Lyss, Carl A	190	St. Louis
Lytle, Edwin L	190	St. Louis
Lytle, Michael F	125	Shawnee Mission, KS

M

Maben, Sam E	125	Kansas City
MacDonald, Robert R, Jr.	190	St. Louis
MacDonald, William C	190	St. Louis
Macdonnell, Thomas M	210	Marshfield
MacGee, Edwin E	125	Kansas City
Machek, Otakar	190	St. Louis
Mackey, Richard L	002	St. Louis
MacKinnon, Susan E	190	St. Louis
MacLaughlin, James C	102	Hot Springs, AR
Macleod, Angus	190	St. Louis
Macler, Henry H, Jr.	190	Augusta
MacNaughton, Ralph E	125	Kansas City
MacNaughton, Robert A	125	Kansas City
MacNaughton, Robert A, II	050	Liberty
Madden, Michael L	125	Kansas City
Maddipati, Sreedevi	190	St. Louis
Madduri, Aruna D	034	Poplar Bluff
Madduri, Sivaprasad D	034	Poplar Bluff
Madrid, Dominador O	190	St. Louis
Magaletta, George E	002	St. Louis
Magaw, David C	066	Everton
Magee, Robert L	214	Eldorado Springs
Magee, W. Edwin	190	Imperial
***Magill, William S**	082	Springfield
Magruder, Lyell M	214	Nevada
Mahboubi, Aziz O	202	Sikeston
Maher, Robert W	082	Springfield
Mahmoud, Said F	125	Kansas City
Mahnken, Robert F	082	Springfield
Mais, Thomas E	125	Shawnee Mission, KS
Maitz, Carlos A	190	St. Ann
Majeed, Mohammed F	126	Kansas City
Major, Troy E	082	Springfield
Majors, Patrick F	190	St. Louis
Majzoub, Hish S	102	Joplin
Makos, Mignon M	030	St. Joseph
Malkoff, Marc D	190	St. Louis
Mallouk, Alexander G	125	Kansas City
Mallow, James E	125	Kansas City
Malmberg, Virgil L	190	Chesterfield
Maloney, Robert M	190	St. Louis
Maminta-Streiff, Maria G	190	St. Louis
Manansala, Antonio Q	190	St. Louis
Mangalat, Narayanan K	102	Joplin
Mangum, William B	125	Independence
Mangunta, Vijaya K	178	Sedalia
Mani, Mary E	190	Clayton
Manire, John E	102	Joplin
Mann, James K	150	Hannibal
Mann, Rodney M	126	Kansas City
Mannis, Charles I	190	St. Louis
Manske, Paul R	190	St. Louis
Mantell, Jack M	082	Springfield
Mantese, Vito A	190	St. Louis
Mantovani, John F	190	St. Louis
Maple, Francis M	082	Springfield
Maragos, Demetrios C	126	Kansas City
Maranan, Diosdado L	106	Arnold
Marbarger, John P, Jr.	190	St. Louis
Marcellus, Peter R	208	Branson
Marchiando, Albert W	074	Washington
Marchosky, J. Alex	190	Chesterfield
Marcus, Michael D	190	St. Louis
Marcus, Morris D	190	St. Louis
Mardini, Edward E	138	Bonne Terre
Margolis, David M	190	St. Louis
Margolis, Robert P	190	St. Louis
Marietta, William G	042	Cape Girardeau
***Marietta-Nunez, Deborah**	126	Kansas City
Markway, Gregory A	125	Independence
Marr, Garrett L	125	Kansas City
Marrs, David B	189	St. Charles
Marsh, Jeffrey L	190	St. Louis
Marshall, Hal E	125	Kansas City
Marshall, Jay P, II	190	Chesterfield
Marshall, Michael P	002	Kansas City
Marshall, William G	026	Glasgow
Marshall, William H	058	Jefferson City
Marston, F. James	030	St. Joseph
Marti, Larry B	135	Rolla
Martin, Chris J	026	Columbia
Martin, Clarence A	102	Joplin
Martin, Daniel J	190	St. Louis
Martin, Daniel J, Jr.	190	St. Louis
Martin, David S	190	Chesterfield
Martin, Gregory E	126	Gladstone
Martin, Jeffrey W	190	Bridgeton
Martin, John N	030	St. Joseph
Martin, Mark W	125	Lee's Summit
Martin, Richard A	042	Cape Girardeau
Martin, Robert A	206	West Plains
Martin, Scott A	190	Chesterfield
Martin, Stanley B	190	St. Charles
Marty, David R	058	Jefferson City
Martz, John C	190	St. Louis
Marvin, Robert D	126	Kansas City
Marx, Stephanie A	126	Gladstone
Maslan, Mark J	125	Kansas City
Mason, Mary Jan	135	Steelville
Mass, Joan H	190	St. Louis
Massey, Vickie	125	Kansas City
Masters, Edwin J	042	Cape Girardeau
Masters, William H	190	Tucson, AZ
Matava, Matthew	190	St. Louis
Mathew, Ruby	190	Chesterfield
Mathews, Jeffrey E	190	St. Louis
Matile, Gerald U	125	Kansas City
Matlock, Mark S	102	Joplin
Matovich, Violet B	125	Kansas City
Matson, Jeffrey A	125	Kansas City
Matta, Camille S	125	Kansas City
Mattax, James B, Jr.	082	Springfield

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*Doctor of Osteopathy

Matthews, J. Mark Kansas City	125
Matthews, John I Jefferson City	058
Matthews, John G Overland Park, KS	190
Matthews, Richard H Rolla	135
Matthews, Thomas D Washington	074
Maughs, Sydney B St. Louis	190
Mauldin, Charles C Springfield	082
Maupin, Kathy C St. Louis	190
Maves, Michael D Alexandria, VA	190
Maxson, Katherine A Chesterfield	190
Maxson, Theodore R Warrensburg	110
May, Albert L Poplar Bluff	034
Mayer, John H, Jr. Shawnee Mission, KS	125
Mayer, Lawrence M Cape Girardeau	042
Mayer, Robert A Pocono Pines, PA	190
Mayes, Ben R St. Louis	190
Maylack, Fallon H Florissant	190
Maynard, Colleen M Kansas City	125
Mayuga, Edgardo G St. Louis	190
Mayuga, Laureano G Cabool	206
Mayus, Joseph L Springfield	082
McAdam, C. Rush St. Louis	190
McAfee, Gordon Springfield	082
McAllister, John W, II St. Peters	189
McArthur, Carole P Kansas City	126
McBride, Marsha M St. Louis	195
McCabe, Eugene J St. Charles	189
McCadden, Michael E St. Louis	190
McCalla, John P Kansas City	050
McCallister, Ben D Kansas City	125
McCanse, Andrew Kansas City	125
McCanse, Lynn R N. Kansas City	050
McCarthy, Christopher St. Louis	190
McCarthy, John F St. Louis	002
McClain, Thomas D Springfield	082
McClennan, Bruce L St. Louis	190
McCloud, Deborah J Joplin	102
McClung, Mark W Kansas City	125
McConahay, David R Kansas City	125
McConchie, James E Lee's Summit	125
McCool, James F St. Louis	190
McCorcle, Marcus D Springfield	082
McCord, E. Scott Columbia	026
McCormack, Robert E Kansas City	125
McCormick, James E Kansas City	050
McCown, Allan H St. Louis	190
McCoy, Frederick J Kansas City	125
McCray, Glen M Springfield	082
McCray, Stephen A N. Kansas City	050
McCroskey, Brian L Kansas City	125
McCroskey, Lon C Kansas City	125
McCullough, James P Overland Park, KS	125
McCullough, Joseph E Kansas City	125
McCullough, Timothy L Chesterfield	002
McDavid, Robert E Columbia	026
McDermott, Alfred E Perryville	174
McDonald, Herbert L Bolivar	066
McDonald, Margaret E Joplin	102
McDonald, Mary K St. Louis	195
McDonald, Michael G Joplin	102
McDonald, Wallace St. Joseph	030
McDonald, Wilbur P St. Joseph	030
McDonnell, John F Kansas City	125
McDonough, Michael Fenton	002
McElroy, George L, III Jefferson City	058
McElroy, Glenn L Columbia	026
McFadden, Gene A Waverly	118
McFarland, H. R. Shawnee Mission, KS	125
McFarland, Rodney J Neosho	166
McGinnis, William F Chesterfield	190
McGinty, Charles P Cape Girardeau	042
McGinty, Frank H Cape Girardeau	042
McGlothlin, Matthew S Scottsdale, AZ	027
McGonigle, James P Joplin	102
McGonigle, Michael M Joplin	102
McGovney, Janice K Kansas City	050
McGraw, James P Kansas City	126
McGuire, Patricia A St. Louis	190
McGuire, Thomas H Shawnee Mission, KS	125
McIntee, Rae A Kansas City	002
*McIntire, Larry D Joplin	102
McIntire, Timothy L Jefferson City	058
McIntosh, Donald E Kansas City	125
McIntosh, Douglas A Cape Girardeau	042
McKay, Mark T Kansas City	126
McKee, Wallace P Kansas City	125
McKeel, Thomas B Kansas City	125
McKenzie, Randolph A Kansas City	125
McKinney, Daniel C Springfield	082
McKinney, Joe K St. Louis	190
McKinney, John W St. Louis	190
McKinsey, David S Kansas City	125
McKnight, Scott J Liberty	050
McKoy, Charlotte A St. Louis	002
McLaren, David L Columbia	026
McLaughlin, Durnell Kansas City	125
McLaughlin, Richard D Springfield	082
McLaughlin, Sean T Kansas City	126
McLemore, Willie O Kansas City	125
McManama, Gerald P St. Louis	190
McManus, Gerald N. Kansas City	050
McMeekin, Sheila P Overland Park, KS	125
McMillan, David L Neosho	166
McMillen, James J St. Joseph	030
McMillin, John N Springfield	082
McMullin, Forbes A St. Louis	190
McMurray, Scott W Springfield	082
McMurry, Ted A Springfield	082
*McNabb, M. Jeffery Cape Girardeau	042
McNamara, Gerald R Kansas City	050
McNamara, John J St. Louis	190
McNeal, Douglas M Springfield	082
McNitt, Jay D Kansas City	125
McPhee, Mark S Kansas City	125
McQue, Ellen L Hannibal	150
McQueary, Frederick G Springfield	082
Meadows, C. Douglas St. Louis	190
Mecker, Robert Washington	074
Medler, John F St. Louis	190
Medler, P. Louis St. Louis	190
Medlicott, William J Port Townsend, WA	125
Mehaffy, Orville A Joplin	102
Mehlhorn, Gary L Springfield	082
Mehr, David R Columbia	026
Mehra, Ravi St. Louis	190
Meier, Francis X Jefferson City	058
Meier, Mitchell S Joplin	102
Meinberg, William H North Ridge, CA	190
Meiners, David J St. Louis	190
Meiners, Theodore M Chesterfield	190
Mejia, Victor E Sikeston	202
*Melchior, David E Perryville	174
Meldi, Dominic M Springfield	082
Melgaard, Sven R Leawood, KS	125
Melia, B. J., Jr. Kansas City	125
Mell, Roger L Chesterfield	190
*Mellies, Steven D Cape Girardeau	042
Meltz, Gary J St. Charles	189
Memken, John A Hannibal	150
Menchetti, Donald E Springfield	082
Mendelsohn, George E Chesterfield	190
Mendelsohn, Robert S St. Louis	190
Mendez, Maria A Springfield	082
Mendonsa, Lawrence E Chesterfield	190
Menne, Marvin C Ironton	138
Mentgen, Carl N Springfield	082
Meredith, William R Joplin	102
Merenda, Frank J St. Louis	190
Merenda, James T St. Louis	190
Merenda, Sam J St. Louis	190
Merkel, Kurt D St. Louis	190
Merkle, John A St. Louis	190

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*Doctor of Osteopathy

Merritt, Burch A	**190**	St. Louis
Mertz, Janet S	**125**	Kansas City
Messmore, Virginia P	**126**	Kansas City
Mestad, Peter H	**125**	Kansas City
Mestres, Hugh M	**190**	St. Louis
Metry, Donald J, Jr.	**078**	Chillicothe
Metzler, Michael H	**026**	Columbia
Meyer, D. Joseph, Jr.	**026**	Columbia
Meyer, Jay L	**190**	St. Louis
Meyer, Jerry L	**118**	Concordia
Meyer, John S	**190**	Chesterfield
Meyer, John W	**082**	Springfield
Meyer, Joseph V	**195**	St. Louis
Meyer, Melvin E	**190**	St. Louis
Meyer, Paul W	**125**	Shawnee Mission, KS
Meyer, Randall E	**058**	Jefferson City
Meyer, Robert C	**190**	St. Louis
Meyer, Wayne W	**190**	Bridgeton
Meyers, Elsie F	**190**	St. Louis
Meyers, Jerry R	**189**	St. Peters
Meyers, John B	**190**	St. Louis
Meyers, Robert W	**190**	St. Louis
Meystrik, Rosellen S	**082**	Springfield
***Michael, Roy A**	**058**	Jefferson City
Michael, Vernon E	**190**	St. Louis
Michaelree, John F	**190**	St. Louis
Michaels, Robert H	**082**	Springfield
Michelson, Richard B	**125**	Kansas City
Middleton, Jerry N	**190**	Chesterfield
Middleton, Mary J	**030**	St. Joseph
Miedema, Brent W	**026**	Columbia
Mihalevich, John A, Jr.	**082**	Springfield
Milder, Barry D	**190**	St. Louis
Milder, Benjamin	**190**	St. Louis
Miles, George O	**125**	Shawnee Mission, KS
Miles, John D	**027**	Columbia
Miles, Richard W	**102**	Joplin
Miles, Wayne B	**082**	Springfield
Milgram, Byron A	**125**	Kansas City
Mill, William B, Jr.	**190**	St. Louis
Miller, Charles W	**190**	St. Louis
Miller, Charles, Jr.	**190**	St. Louis
Miller, Dace L	**082**	Springfield
Miller, Donald	**058**	Jefferson City
Miller, Geoffrey W	**190**	St. Louis
Miller, Gerald L, Jr.	**125**	Kansas City
Miller, Harry G	**086**	Clinton
Miller, James E	**190**	St. Louis
Miller, John T	**125**	N. Kansas City
Miller, Joseph P	**042**	Cape Girardeau
Miller, Jule P	**190**	St. Louis
Miller, Leroy J	**026**	Columbia
Miller, Michael R	**125**	Kansas City
Miller, Pamela S	**026**	Rolla
Miller, Robert N	**190**	St. Louis
Miller, Suzanne L	**190**	Grover
Miller, William D	**030**	St. Joseph
Miller, Wilson H	**125**	Kansas City
Millet, Ruth E	**125**	Kansas City
Mills, Douglas J	**027**	Columbia
Mills, Melissa J	**002**	Overland Park, KS
Millwee, Elizabeth M	**026**	Centralia
Milne, Jay L	**082**	Springfield
Milster, Clyde R	**190**	St. Louis
Minkoff, I. Monica	**189**	St. Peters
Minnigerode, Lana K	**125**	Kansas City
Minnigerode, Turner L	**125**	Kansas City
Mir, A. Rauf	**125**	Kansas City
Miravite, Jaime V	**002**	Chesterfield
Mirbaha, Mitchell M	**190**	St. Louis
Mischnick, Carol R	**190**	Chesterfield
Miskovsky, Emil F	**190**	St. Louis
Missey, Wilburn C	**190**	Chesterfield
Mistry, Tehmton S	**190**	Columbia, IL
Mitchell, Andrew D	**125**	Prairie Village, KS
Mitchell, Franklin L	**026**	Columbia
Mitchell, John D	**125**	Kansas City
Mitchell, Lynn D	**026**	Columbia
***Mitchem, Randall E**	**126**	Prairie Village, KS
Mitra, Nirmal K	**125**	Kansas City
Mitterando, James L	**126**	Kansas City
Mittleman, Frederick S	**125**	Prairie Village, KS
Mizell, Myron W	**082**	Springfield
Mobley, Gilbert L	**082**	Springfield
Moeller, F. Delbert	**189**	Lake St. Louis
Moeller, Randall J	**030**	St. Joseph
Moffe, Thomas C	**082**	Springfield
Mohrman, Raymond F	**190**	Bridgeton
Mohs, Frank R	**190**	St. Louis
Mohsen, Aly M	**082**	Springfield
Molden, C. Scott	**190**	St. Louis
Molden, Charles A	**190**	Ballwin
Mollman, H. Dennis	**190**	Chesterfield
Monaco, Michael	**125**	Harrisonville
Monafo, William W	**190**	St. Louis
Monaghan, Greg G	**026**	Columbia
Mongan, James J	**125**	Kansas City
Monroe, C. Dean	**026**	Columbia
Monteleone, Patricia L	**190**	St. Louis
Montello, Samuel A	**125**	Shawnee Mission, KS
Monterubio, Fred R, Jr.	**190**	St. Louis
Montes, Arturo C	**190**	Florissant
Montgomery, Austin F	**190**	St. Louis
Montgomery, Michael A	**125**	N. Kansas City
Montoya-Vinluan,Aurea C	**125**	Raytown
Moolsintong, Pornchai	**190**	St. Louis
Mooney-Smith, Patricia	**125**	Kansas City
Moore, Candice A	**126**	Topeka, KS
Moore, De Armon	**082**	Springfield
Moore, Harry G, Jr.	**190**	St. Louis
Moore, John M	**125**	Kansas City
Moore, Julie A	**125**	Independence
Moore, Michael R	**206**	West Plains
Moore, Michael T	**214**	Nevada
Moore, Richard E	**042**	Cape Girardeau
Moore, Thomas B	**102**	Joplin
Moore, Walter L	**190**	St. Charles
Moran, Thomas M	**190**	St. Louis
Morantz, Robert A	**125**	Kansas City
Moranville, Benedict A	**030**	St. Joseph
Morehead, William E	**070**	Malden
Morehouse, Paul D	**074**	Washington
Moreng, George R	**125**	Kansas City
Moreton, David W	**026**	Columbia
Morey, Kirk P	**190**	St. Louis
Morgan, David B	**125**	Kansas City
Morgan, Dix R	**042**	Cape Girardeau
Morgan, Edward B	**190**	St. Louis
Morgan, Harry C	**190**	Waynesville
Morgan, John L	**082**	Springfield
Morgan, Mary	**190**	St. Louis
Morgan, Richard L	**125**	Kansas City
Morgan, Stephan S	**190**	St. Louis
Morgan, W. Tom, Jr.	**026**	Columbia
Morgan, Willy J	**190**	E. St. Louis, IL
Moriconi, William J	**190**	St. Louis
Moritz, Gerald	**190**	Bridgeton
Moritz, K. Lynne	**190**	St. Louis
Morley, Mary A	**190**	Chesterfield
***Morley, Ronald F**	**058**	Jefferson City
Morris, Alan H	**190**	St. Louis
Morris, Donald G	**195**	Ballwin
Morris, J. H.	**125**	Independence
Morris, John J	**026**	Columbia
Morris, R. William	**190**	St. Louis
Morrison, Arlen E	**190**	St. Louis
Morrison, R. Gideon	**178**	Sedalia
Morrison, Richard A	**125**	Independence
Morrison, Robert R	**125**	Kansas City
Morrison, Stephen K	**082**	Springfield
Morrison, Thomas A	**166**	Aurora
Morrison, Tom V	**208**	Branson

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*Doctor of Osteopathy

Morrow, N. Eugene	082	Springfield
Morse, John P	070	Kennett
Morton, David J	190	St. Louis
Morton, Paul C	082	Springfield
Morton, Wayne L	214	Osceola
Mosby, Larry D	026	Columbia
Moseley, F. Thomas	082	Springfield
Moses, Robert A	190	St. Louis
Mosher, Amy A	002	St. Louis
Mosley, Julian C	190	St. Louis
Moss, Paul	125	Overland Park, KS
Mossie, Raymond D	050	Kansas City
Motchan, Dennis G	190	Bridgeton
Mothershead, John L	030	St. Joseph
Motier, Thomas H	190	St. Louis
Mou, Susan M	125	Kansas City
Mowrey, William O	190	St. Louis
Moya, Carlos E	030	St. Joseph
Mrosak, Daniel R	118	Lexington
Mruzik, John	027	Columbia
Muckerman, Richard C, II	190	St. Louis
Muckerman, Richard I. C.	190	St. Louis
Muegge, F. David	082	Springfield
Muehlebach, Victoria	125	Kansas City
Mueller, Adolph R	102	Joplin
Mueller, Clarence E	190	O'Fallon
Mueller, John J	190	St. Louis
Mueller, Joseph A	190	St. Louis
Mueller, Martin J	125	Kansas City
Mueller, Randall E	026	Columbia
Muhammud, Faquir	190	St. Louis
Muhm, H. Yale	189	St. Charles
Mujica, Patricio H	030	St. Joseph
Mukharji, Jhulan	125	Kansas City
Mulder, George D	030	St. Joseph
Mullarky, Wilbur A	190	Oviedo, FL
Mullen, Jack	138	Bonne Terre
Mullen, Mary E	014	Mexico
Mullenger, Keith L	190	Belleville, IL
Mullican, Charles N	030	St. Joseph
Mullins, Bernard L	050	Kansas City
Mullins, John E	190	Chesterfield
Mundis, Richard J	125	Kansas City
Mundy, David C	125	Kansas City
Mundy, William L	125	Merriam, KS
Munger, Michael L	125	Kansas City
Munro, John S	125	Kansas City
Muraywid, Ahmad H	014	Mexico
Murdock, Nathaniel	190	St. Louis
Muro, Washington S	002	Kansas City
Murphy, J. Peter, Jr.	190	St. Louis
Murphy, James A	030	St. Joseph
Murphy, John P	125	Overland Park, KS
Murphy, Margaret A	195	Chesterfield
Murphy, Michael C	190	St. Louis
Murphy, Timothy P	030	St. Joseph
Murray, Alison H	190	St. Louis
Murrell, H. Jerry	026	Columbia
Muscato, Joseph J	026	Columbia
Muscato, Mary S	026	Columbia
Musick, Steven E	027	Columbia
Musick, William D	026	Jefferson City
Mutchnick, Norman	125	Kansas City
Mutha, Sunita	002	St. Louis
Muzaffaruddin, Mohammed	189	St. Louis
Myears, Donald W	082	Springfield
Myers, Carl M	125	Platte City
Myers, Duane E	102	Joplin
Myers, Gary H	190	Chesterfield
Myers, George H	125	Kansas City
Myers, Ivan T	190	St. Louis
Myers, John S	125	Kansas City
Myron, Mark C	125	Kansas City

N

Nachtigal, Michael P	082	Springfield
Nagy, Al L	034	Poplar Bluff
Nagy, Rickey E	125	Kansas City
Nair, Jyotsna	027	Columbia
Nair, Venu S	126	Overland Park, KS
Nakra, Rashmi R	190	St. Louis
Nanson, Duane	026	Columbia
Narayan, Dilip L	190	Chesterfield
Narkiewicz, Lawrence S	190	St. Louis
Naseer, Riaz A	190	Granite City, IL
Nash, Helen E	190	St. Louis
Nash, Homer E, Jr.	190	St. Louis
Nash, Steven D	125	Kansas City
Nathan, Lester J	190	Fenton
Naunheim, Keith S	190	St. Louis
Navato, Jose R	125	Independence
Navato-Dehning, Cielo D	126	Lee's Summit
Neal, James G	082	Springfield
Near, David M	190	Florissant
Neblett, Lewis M	082	Rogersville
Neely, J. Gail	190	St. Louis
***Neely, James W**	078	Gallatin
Neighbor, Ernest H	125	Kansas City
Neihart, Robert E	125	Kansas City
Neimark, Roy P	178	Sedalia
Nelson, Bentley A	125	Leawood, KS
Nelson, David E	082	Springfield
Nelson, Donald C	082	Springfield
Nelson, J. Roger	190	St. Louis
Nelson, Michael J	125	Lee's Summit
Nelson, Richard E	125	Kansas City
Nemec, Edward S	190	St. Louis
Nepute, James A	190	St. Louis
Nesselrode, John H	125	Independence
Neu, Kenneth W	082	Springfield
Neu, Leo T, Jr.	082	Springfield
Neu, Leo T, III	082	Springfield
Neubauer, Marcus A	125	Overland Park, KS
Neuman, Neal	190	St. Louis
Newbold, Steven E	125	Monett
Newman, Joseph A	102	Joplin
Newman, Mary J	166	Cassville
Newman, Matthew	190	St. Louis
Newman, Ray E	125	Kansas City
Newman, Robert L	125	Kansas City
Newman, William R	102	Joplin
Newman-Koehn, Mica K	198	Marshall
Newport, Gerald	190	Florissant
Newport, Mark D	082	Springfield
Nguyen, Helen T	030	St. Joseph
Nguyen, Khanh X	002	Kansas City, KS
Nicholas, Stephen P	190	St. Louis
Nicholis, G. Ronald	125	Kansas City
Nichols, Margaret E	102	Joplin
Nichols, W. Kirt	026	Columbia
Nickell, Margaret B	125	Kansas City
Nickell, Michael D	102	Joplin
Nicolai, Charles H	190	St. Louis
Niedermeyer, George J	190	St. Louis
Nielsen, Carl H	190	St. Louis
Niemeyer, John H	190	St. Louis
Niesen, Anna R	190	St. Louis
Niesen, Frank J	190	St. Louis
Niesen, Thomas E	190	Chesterfield
Nieuwenhuizen, Maarten	026	Columbia
Nigro, Thomas L	125	Kansas City
Nile, David A	190	St. Louis
Nishi, Toshio	190	St. Louis
Nitzel, Scott A	126	Kansas City
Nix, J. Gustavo	066	Bolivar
Nixon, Edward E	078	Independence
Noback, Richardson K	125	Las Vegas, NV
Nogalski, Michael P	190	St. Louis
Nolan, Charles J	190	Chesterfield

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*Doctor of Osteopathy

Nolker, Stephen G	**126**	Kansas City
Nolph, Karl D	**026**	Columbia
Noltensmeyer, Milton H	**125**	Shawnee Mission, KS
Nomura, Roy M	**190**	St. Louis
Nordhues, Craig A	**082**	Springfield
Nordlicht, Scott M	**190**	St. Louis
Norland, Charles C	**190**	St. Louis
Nouhan, Joseph G, Jr.	**190**	St. Louis
Novack, Mark A	**190**	Chesterfield
Nowotny, Thomas J	**190**	St. Louis
Nuetzel, John A	**190**	St. Louis
Nulton, Carnie C	**125**	Kansas City
Nussbaum, Larry	**050**	Liberty
Nwaobasi, Sam	**190**	Florissant
Nyazee, Muhammad A	**190**	Bridgeton
Nye, Robert A	**190**	St. Louis
Nye, Terry R	**082**	Springfield

O

Oakley, Margaret M	**190**	St. Louis
O'Brien, Edward J, Jr.	**190**	St. Louis
O'Brien, Robert M	**190**	St. Louis
O'Brien-Su, Eileen M	**126**	Merriam, KS
Occeno, Victor G	**166**	Cassville
Ochoa, Pedro	**190**	Valmeyer, IL
Ockner, Samuel A	**190**	Chesterfield
O'Connell, Gregory P	**126**	Kansas City
O'Connell, Timothy	**190**	St. Louis
O'Connor, John J	**074**	St. Louis
O'Connor, Mary C	**125**	Kansas City
O'Connor, Robert J	**190**	Florissant
O'Donnell, Francis E	**190**	St. Louis
O'Donnell, Susan M	**174**	Ste. Genevieve
O'Dowd, Mary K	**002**	Chesterfield
O'Farrell, Thomas P	**125**	Kansas City
Offner, Jennifer K	**027**	Quincy, IL
O'Hearne, John J	**125**	Kansas City
Ohlms, David L	**190**	St. Louis
Ojascastro, Alejandro C	**190**	St. Louis
Ojascastro, Lou	**190**	St. Louis
O'Keefe, James H, Jr.	**125**	Kansas City
O'Keefe, Timothy	**102**	Joplin
Oleson, Gale B	**125**	Blue Springs
Olive, G. Chapman	**082**	Springfield
Olive, George C	**166**	Neosho
Olive, Paul M	**082**	Springfield
Oliver, G. Charles	**002**	St. Louis
Oliver, George A	**138**	Farmington
Olk, R. Joseph	**002**	Chesterfield
Olsen, Teresa A	**082**	Springfield
Olson, E. Rule	**082**	Springfield
Olson, Gary S	**042**	Cape Girardeau
Olson, James H	**050**	Liberty
Olson, Richard O	**189**	St. Charles
Olson, Robert J	**082**	Springfield
Olson, Stephen A	**126**	Shawnee Mission, KS
O'Malley, James F	**125**	Leawood, KS
Omell, Gary H	**190**	St. Louis
Onder, Robert F	**190**	St. Louis
O'Neal, Lawrence W	**190**	St. Louis
O'Neil, James H	**125**	Prairie Village, KS
O'Neil, Jerome H, Jr.	**190**	St. Louis
Ong, Eng L	**190**	St. Louis
Ong, Ofelia S	**190**	St. Louis
***Onik, Jan F**	**150**	Louisiana
Onken, Henry D	**190**	St. Louis
Oppenheimer, Henry E	**190**	St. Louis
Opper, Susan E	**125**	Kansas City
Oppermann, Karen J	**125**	Independence
O'Reilly, D. Elliott	**190**	St. Louis
Orgel, S. Michael	**190**	St. Louis
Oro, John J	**026**	Columbia
O'Rourke, James E	**174**	Ste. Genevieve
Orr, Holly F	**027**	Columbia
Orr, Robert M	**125**	Kansas City
Orsay, Paul K	**190**	Chesterfield
Ortbals, David W	**190**	Chesterfield
Orth, O. Gerald	**026**	Columbia
Ortiguero, Leopoldo M	**190**	St. Louis
Ortmeyer, Leroy F	**190**	St. Louis
Osbourn, Richard A	**038**	Fulton
Ossman, Julian A	**058**	Jefferson City
Ost, Mark D	**125**	Kansas City
Ostapowicz, Frank	**190**	St. Louis
Ostapowicz, Tamara L	**190**	St. Louis
Ostergaard, Daniel J	**125**	Kansas City
Ostrow, Bridget F	**042**	Cape Girardeau
Ostrow, Louis B	**042**	Cape Girardeau
O'Sullivan, Daniel F	**190**	St. Louis
Ota, David M	**026**	Columbia
Othmer, Ekkehard	**050**	Kansas City
Otis, Stephanie A	**002**	St. Louis
O'Toole, Lisa	**126**	Overland Park, KS
O'Toole, Patrick M	**125**	Kansas City
Ott, F. Thomas	**190**	St. Louis
Ott, Harold J	**190**	St. Louis
Ott, William J	**190**	St. Louis
Otten, Joseph V	**190**	Bridgeton
Ottinger, Christopher M	**125**	Independence
Otto, William J	**082**	Springfield
Ouellette, David F	**150**	Hannibal
Ovens, Lisa	**082**	Springfield
Overend, Don S	**082**	Springfield
Overesch, Harry B	**125**	Kansas City
Owen, John D	**125**	Liberty
Owen, Robert F	**190**	St. Louis
Owens, Robert H	**125**	Shawnee Mission, KS
Owens, William D	**190**	St. Louis
Ozar, Milton B	**125**	Miami, FL
Ozenberger, Larry A	**054**	Plattsburg

P

Pacheco, Jose M	**082**	Springfield
Packman, Paul	**190**	St. Louis
Packman, Robert C	**190**	St. Louis
Padilla, Teresita C	**190**	Chesterfield
Padula, Richard T	**125**	Kansas City
Paez, Mauro A	**190**	St. Louis
Paff, David G	**082**	Springfield
***Page, Lawrence V**	**102**	Joplin
Painter, Andrew E	**202**	Portageville
Painter, Lattie B	**170**	Portageville
Pal, Michelle L	**125**	Kansas City
Palazola, Joseph M	**125**	Kansas City
Palcheff, Chris L	**082**	Springfield
Palen, James E	**042**	Cape Girardeau
Palenske, Robert L	**070**	Hornersville
Paletta, Christian E	**190**	St. Louis
Paletta, Francis X, Sr.	**190**	St. Louis
Paletta, Frank	**190**	St. Louis
Paletta, Victor L	**190**	Bridgeton
Palis, Nancy K	**195**	St. Louis
***Palmer, Allen S**	**190**	Bridgeton
***Palmer, Bradley J**	**126**	Mission, KS
Palmer, Stephen M	**190**	St. Louis
Pancoast, Charles H	**042**	Cape Girardeau
Paone, Douglas B	**125**	Kansas City
Papreck, K. T.	**198**	Marshall
Paradelo, Jorge C	**125**	Kansas City
Pardo, Leopoldo P	**190**	Ballwin
Parelman, Joseph J	**125**	Kansas City
Parikh, Sharad P	**190**	Florissant
Paris, William H	**190**	Bridgeton
Park, Bert E	**082**	Springfield
Park, William I, Jr.	**082**	Springfield
Parker, Arthur C	**034**	Destin, FL
Parker, Brent M	**026**	Colorado Springs, CO
Parker, Craig A	**125**	Kansas City

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*Doctor of Osteopathy

Parker, Kim E	Kansas City	125
Parker, Thomas W	St. Louis	190
Parker, William	St. Louis	190
Parkins, George K	Kansas City	125
Parks, Charles	St. Louis	190
Parks, David A	St. Louis	195
Parks, Deborah L	St. Louis	190
Parks, Jon C	Poplar Bluff	034
Parks, Joseph J	Jefferson City	026
Parks, William C	Columbia	026
Parres, Jeffrey A	St. Louis	190
Parsons, Clyde W, III	Springfield	082
Partamian, Krikor O	St. Joseph	030
Parulekar, Dilip G	Fulton	038
Parwatikar, Sadashiv D	St. Louis	190
Paskar, Larry D	Chesterfield	190
***Pasowicz, Timothy C**	Shawnee Mission, KS	126
Passanante, Bartholomew M	St. Louis	190
Passe, Theodore J	Glendale	195
Pastor, Scott A	Kansas City	125
Patel, Ashokkumar B	St. Louis	190
Patel, Bipin T	St. Joseph	030
Patel, Indu B	Barnhart	106
Patel, Natu B	Bethany	078
Patel, Prakesh B	St. Joseph	030
Patel, Raman J	St. Joseph	030
Patrick, Roman L	St. Louis	190
Patrick, Scott E	Prairie Village, KS	126
Patterson, Alec	St. Louis	190
Patterson, Donald C	Columbia	026
Patterson, Donald R	Joplin	102
Patterson, Grover S	Carthage	102
Patty, Carl F	Poplar Bluff	034
***Patty, John R**	Poplar Bluff	034
Pauls, Scott W	Olathe, KS	126
Paulson, Gordon S	St. Joseph	030
Pavelonis, Joel D	Kansas City	002
Pavlovich, Andrew S	Independence	125
Pavlu, Robert R	Waverly	118
Pawsat, John E	Kansas City	125
Payne, David E	Columbia	026
Payne, Meredith C	Chesterfield	190
Pearce, Eugene W.	Kansas City	125
Pearman, Carl C	Kansas City	002
Pearse, Carlton S	Chesterfield	190
***Pearson, Garry D**	Tipton	058
Pearson, Thomas C	Springfield	082
Pearson, William E	St. Louis	190
Peck, William A	St. Louis	190
Peden, Virginia H	St. Louis	190
Peet, Brenda J	Lenexa, KS	126
Pehlman, Joseph E	Malden	070
Peick, Ann C	Poplar Bluff	034
Peigh, Pamela S	St. Louis	190
Pelican, George	St. Louis	190
Pendell, Paul W	Raymore	125
Penilla, Antonio R	St. Louis	190
Penkoske, Michaele M	St. Charles	189
Pennell, Richard C	St. Louis	190
Penney, Larry L	Columbia	026
Penninger, William H	Springfield	082
Pennington, D. Glenn	St. Louis	190
***Pennington, Diane M**	Kansas City	126
Pennington, Michael S	Springfield	166
Pennoyer, James	St. Louis	190
Pentella, Karen J	St. Louis	190
Peplinski, Gary R	St. Louis	195
Pepose, Jay S	St. Louis	002
Pepper, Edward G	St. Louis	190
Pereira, MaryBeth	St. Louis	190
Perez, Adamor R	St. Louis	190
Perez, Blanca M	St. Louis	190
Perez, Carlos A	St. Louis	190
Perez, Jeannie O	Bridgeton	190
Perez, Robert J	St. Louis	190
Perinetti, Enrique P	St. Louis	190
Perkins, David E	Chesterfield	190
Perll, Michael F	Kansas City	125
Perll, Maurice F, Jr.	Kansas City	125
Perlmutter, John C	St. Charles	189
Perlstein, Laurence F	Florissant	190
Perna, Vincent P	St. Louis	189
Pernoud, Flavius G, Jr.	St. Louis	190
Pernoud, Flavius G, III	St. Louis	190
Pernoud, Joan M	St. Louis	190
Perry, Michael C	Columbia	026
Perryman, Douglas R	Kansas City	125
Perryman, J. Chris	Kansas City	125
Perryman, Kathy M	Kansas City	125
Peters, Walter R	Columbia	026
Petersen, James H	Chesterfield	002
Petersen, Larry D	Springfield	082
Peterson, Carl M	Kansas City	125
Peterson, Charles R	Osage Beach	120
Peterson, Craig A	Springfield	082
Peterson, Frederick D	St. Louis	190
Peterson, Jay T	Kansas City	125
Peterson, Stanley S	Springfield	082
Peterson, Stephen E	Kansas City	125
Peterson, Walter R	Kansas City	125
Petit, Carl A	Osage Beach	120
Petkovich, Frank O	St. Louis	190
Pettett, Gary	Kansas City	125
Petzinger, George	St. Louis	195
Pew, Becky A	St. Louis	190
***Pewitt, Charles S**	Jackson	042
***Pfautsch, Mark L**	Cape Girardeau	042
Pfefer, Leland U	Columbia	026
Pfefferkorn, David A	Sikeston	202
Phanijphand, Suwan	Poplar Bluff	034
Phelan, Christie B	Kansas City	125
Philgreen, Donald E	Kansas City	125
Phillips, Abraham M	St. Louis	190
Phillips, Daniel	St. Louis	190
Phillips, John J	Florissant	190
Phillips, Kenneth D	Cape Girardeau	042
Phillips, Ronald L	Kirksville	148
Phillips, Thomas P	Kansas City	125
Phillips, William J	Chesterfield	190
Philpott, Gordon W	St. Louis	190
Phipatanakul, Supote	St. Louis	190
Phlaum, Stephen R	St. Louis	195
Piccirillo, Jay F	St. Louis	190
Pickard, Clarence M	Columbia	026
Pickens, Andrew T	St. Louis	190
Picker, Selwyn	St. Louis	190
Pickering, Lee I	Blue Springs	125
Picus, Joel	St. Louis	002
Piebenga, Larry W	Kansas City	125
Piehler, Jeffrey M	Kansas City	125
Piening, Kurt A	St. Charles	189
Pierce, Dan L	Columbia	026
Pignotti, Blase J	St. Louis	190
Piker, K. Dewayne	Springfield	082
Pimentel, Esperanza M	St. Louis	190
Pinckley, James N	Springfield	082
Pineda, Hector O	St. Louis	190
Pineda, Juan J	Columbia	027
Pingelton, William B	Columbia	026
Pingleton, William W	Shawnee Mission, KS	050
Pinkerton, Joe A, Jr.	Kansas City	125
Pinkham, Chris M	Kansas City	050
Pintado, Susan O	Joplin	102
Piontek, James F	Liberty	050
Piontek, Jerome G	Chesterfield	190
Piper, Terrence L	St. Peters	189
Piquette, Craig A	Omaha, NE	190
Pitiyanuvath,Tasanaporn	Kansas City	125
Pitney, Phillip W	Louisiana	150
Pitsinger, N. Bruce	Chesterfield	190
***Pitt, James B**	Osage Beach	120
Pittman, David L	Columbia	026

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*Doctor of Osteopathy

Pittman, Gerald R	**190**	St. Louis
Pittman, Susan	**190**	St. Louis
Pittmann, Thomas	**190**	St. Louis
Pitts, Olevia	**125**	Overland Park, KS
Place, Kenneth C	**125**	Kansas City
Plax, Steven I	**190**	St. Louis
Plowman, Edward M	**150**	Hannibal
Pluard, Timothy J	**189**	St. Charles
Podolsky, Howard S	**002**	St. Louis
Podrecca, Guido I	**082**	Springfield
Poger, Marshall E	**190**	St. Louis
Poggemeier, David A	**189**	St. Charles
Poggemeier, William H	**189**	St. Charles
Pogson, George W, III	**125**	Independence
Pohl, David L	**190**	St. Louis
Pojanasomboon, Pichat	**135**	Rolla
Politi, Gregory B	**125**	Kansas City
Politte, Lenard L	**026**	Columbia
Pomeranz, Howard D	**195**	St. Louis
Pomphrey, Martin M, Jr.	**190**	St. Louis
Pompushko, Rosalie	**125**	Kansas City
Pon, Marcelino	**190**	St. Louis
Pontillas, Job B	**174**	Perryville
Poole, Anthony G	**202**	Sikeston
Porte, Karen L	**102**	Joplin
Porter, Charles B	**125**	Kansas City
Porter, Michael J	**125**	Kansas City
Porter, Susan S	**125**	Kansas City
Porter, Walter N, Jr.	**125**	Lenexa, KS
Portnoff, Lee S	**190**	St. Louis
Portnoy, Jay M	**002**	Kansas City
Posey, Douglas H, Jr.	**030**	St. Joseph
Post, Stephen L	**190**	St. Louis
Postma, George S, Jr.	**125**	Shawnee Mission, KS
Potashnick, Robert	**190**	St. Louis
Pottenger, L. Kennett	**102**	Joplin
Potter, Caryl A, Jr.	**030**	St. Joseph
Potter, Reese H	**190**	St. Louis
Potts, Dan E	**190**	Chesterfield
Potts, Donald A	**125**	Kansas City
Potts, Fred E, III	**082**	Springfield
Potts, Gregory A	**074**	Washington
Powell, Alan E	**125**	Independence
Powell, Edwin M	**082**	Springfield
Powell, John A	**190**	St. Louis
Powell, Kenneth R	**082**	Springfield
Powell, Lisa G	**082**	Springfield
Powers, Catherine A	**125**	Leawood, KS
Prater, Bill G	**082**	Springfield
Prater, Kimberley A	**082**	Springfield
Prater, Thomas G	**082**	Springfield
Prelutsky, David J	**190**	St. Louis
Prensky, Arthur L	**190**	St. Louis
Prentice, Anibal F	**125**	Kansas City
Presley, Jimmy C	**082**	Springfield
Preston, Bruce E	**206**	West Plains
Presutto-Nelson, Kathleen A	**082**	Springfield
Previti, Vincent	**082**	Springfield
Prey, Marianne U	**190**	St. Louis
Pribor, Elizabeth F	**190**	Chesterfield
Prica, George, Jr.	**026**	Columbia
Price, Carl I	**082**	Springfield
Price, Hilton I	**190**	St. Louis
Price, Patrick K	**125**	Shawnee Mission, KS
Price, Richard B	**125**	Overland Park, KS
Price, Richard C	**214**	Harrisonville
Prichard, Terri L	**126**	Kansas City
Prickett, David C, Jr.	**050**	Kearney
Pringle, Scot G	**042**	Cape Girardeau
Pro, John D	**125**	Kansas City
Proctor, Donald C	**178**	Sedalia
Proskey, Vincent J	**190**	Chesterfield
Prostic, Edward J	**125**	Kansas City
Prstojevich, Steven J	**190**	St. Louis
Pruett, Burchard S	**190**	Prescott
Pruett, Paul L	**082**	Springfield
Pryor, Harold J	**125**	Kansas City
Pryor, Ira Jo	**102**	Joplin
Psaltis, Phillip E	**030**	Kansas City
Puckett, Charles L	**026**	Columbia
Pugh, Richard G	**125**	Blue Springs
Purcell, Harry K	**190**	St. Louis
Purcell, Henry E	**190**	St. Louis
Purcell, John J, Jr.	**190**	St. Louis
Purcell, Paul W	**050**	Renton, WA
Purcell, Richard D	**082**	Springfield
Puro, Edward A	**190**	Florissant
Putnam, John L	**082**	Springfield
Pyeatte, Jacob P, Jr.	**042**	Cape Girardeau
Pyszczynski, Dennis R	**125**	Kansas City

Q

Quer, Erich A	**125**	Shawnee Mission, KS
Quiason, Arturo G	**125**	Independence
Quiason, Emmeline P	**125**	Independence
Quinn, Paul S	**082**	Strafford
Quinn, Rodney D	**082**	Springfield
Qureshi, Abdul R	**190**	St. Louis

R

Raborar, Arteso C	**082**	Springfield
Rabushka, Sanford E	**190**	St. Louis
Racela, Luz S	**125**	Leawood, KS
Rachlin, Maxwell	**190**	Ellington, CT
Radel, Steven M	**189**	St. Peters
Rader, Ada E	**125**	Kansas City
Radford, Diane M	**190**	St. Louis
***Radinsky, Stephen**	**190**	St. Louis
Ragland, John E	**058**	Bonnots Mill
Rahman, Moududur	**190**	Chesterfield
Rajcher, Wilma J	**026**	Columbia
Rajendran, Sundar	**126**	Kansas City
Raju, Niranjana	**174**	Ste. Genevieve
Rall, Kenneth L	**026**	Independence
Ramey, Ehret O	**125**	Kansas City
Ramirez, Ricardo M	**034**	Kansas City
Ramirez, Samuel G	**190**	St. Louis
Ramos, Americo G	**125**	Shawnee Mission, KS
Ramos, Richardo R	**190**	St. Louis
Ramsey, J. Darryl	**042**	Cape Girardeau
***Ramsey, Jesse R**	**042**	Cape Girardeau
Ramsey, Robert H	**190**	Florissant
Randolph, Bernard C	**190**	St. Louis
Randolph, Bernard C, Jr.	**002**	St. Louis
Randolph, Kerry A	**082**	Springfield
Randolph, Mary K	**126**	Kansas City
Rangineni, Rajagopal	**030**	St. Joseph
Rankin, Diane	**190**	St. Louis
***Rankin, Wendell D**	**102**	Joplin
Rao, Ricardo	**190**	St. Louis
Rao, Sumati	**190**	St. Louis
Rao, Vijaya Kuma P	**102**	Joplin
Rapke, Stephanie L	**026**	Columbia
Rapp, Earl L	**150**	Hannibal
Rappold, Henry O	**190**	Chesterfield
Raskas, David	**002**	St. Louis
Ratcliff, Keith M	**074**	Washington
Ratkin, Gary A	**190**	St. Louis
Ratnam, Dasari V	**125**	Kansas City
Rau, Michael E	**074**	Washington
Rawlins, Fred E	**042**	Cape Girardeau
Rawson, Perry G	**074**	Washington
***Ray, Terry L**	**026**	Columbia
Raybould, Michael W	**125**	Kansas City
Raynor, Richard C	**198**	Marshall
Razzaq, A.	**190**	St. Louis
Reaney, John A	**125**	Leawood, KS
Reardon, Thomas F	**190**	St. Louis
Reardon, Thomas M	**050**	Kansas City
Recchia, Kimberlee C	**190**	Chesterfield

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*Doctor of Osteopathy

Rector, Joe L	125	Shawnee Mission, KS
Reddy, Ahbiah N	034	Poplar Bluff
Reddy, Agara S	026	Columbia
Reddy, Anchala N	206	West Plains
Reddy, Beena M	190	Wichita, KS
Reddy, Nalini A	206	West Plains
Reddy, R. Ramachandra	042	Cape Girardeau
Reddy, Venoodhar K	126	Kansas City
Redfern, David L	082	Springfield
Redington, James C	050	N. Kansas City
Redington, James C, Jr.	190	St. Louis
Redmon, Conchita M	082	Springfield
Rednam, Krishnarao V	190	Kirkwood
Reed, Glen H	214	Appleton City
Reed, Jonathan R	190	St. Louis
*Reed, Leea D	082	Springfield
Reed, Timothy F	178	Sedalia
Reed, William A	125	Kansas City
Reeder, Charles C	050	Smithville
Reeder, Stephen M	082	Springfield
Reese, Jon A	082	Springfield
Reese, Lester T	190	St. Louis
Reeves, Col., Glen I	190	Chevy Chase, MD
Reeves, R. Bradley	102	Joplin
Regas, Stephen L	126	Kansas City
Reh, Edward P, Jr.	190	St. Louis
Reh, Thomas E	190	St. Louis
Reichert, Timothy J	190	St. Louis
Reifenrath, Bruce H	126	Prairie Village, KS
Reikes, Sanford	195	St. Louis
Reinhard, Edward H	190	St. Louis
Reinhardt, J. Robert R	125	Kansas City
Reintjes, Stephen L	125	Kansas City
Reisler, David M	190	Chesterfield
Reiss, Jeanne E	125	Kansas City
Reister, Philip D	125	Kansas City
Rejent, Anthony J	190	St. Louis
Remis, Robert E	030	St. Joseph
Rendleman, George F, Jr.	190	St. Louis
Rengachary, Dhanalakshmi	125	Kansas City
Rennard, Marvin	190	St. Louis
Renner, Gregory J	026	Columbia
Renner, Julie A	002	University City
*Reno, Lisa K	018	Lamar
Repp, Theodore J, Jr.	190	St. Louis
Retter, Kenneth W	042	Cape Girardeau
Revare, Paul	050	Kansas City
Revels, Harry R, III	125	Leawood, KS
Reyes, Efraim	082	Springfield
Reyes, Jose T	190	St. Louis
Reyes, Lirio M	082	Springfield
Reyes, Luis A	190	Arnold
Reynolds, James A	190	Chesterfield
Reynolds, Robert B, Sr.	190	Chesterfield
Reynolds, Susan K	190	St. Louis
Rezvani, Laghaieh	202	Sikeston
Rhee, Seoung E	190	St. Louis
Rhoades, Charles E	125	Kansas City
*Rhoads, Mark D	102	Joplin
Ribaudo, J. Michael	190	St. Louis
*Ricci, Robert G	050	Leawood, KS
Rice, Karen H	058	Jefferson City
Rice, Kathleen G	082	Springfield
Rice, Lee Ro	102	Joplin
Rice, Valerie M	050	Kansas City, KS
Rich, Keith M	190	St. Louis
Rich, Margaret M	190	St. Louis
Richards, Dean D, III	125	Kansas City
Richards, Frank O	190	St. Louis
Richards, William H	030	St. Joseph
Richardson, Curtis J	030	St. Joseph
Richardson, Donna T	074	Union
Richardson, George A	074	Union
Richardson, Marion W	125	Kansas City
Richardson, Norbert L	074	Union
Richardson, Thomas F	190	St. Louis
Richardson, William R	074	Union
Richert, Robert C	125	Kansas City
Richmond, Ron	042	Cape Girardeau
Ridenhour, C. E. Gene	026	Columbia
Ridenour, Brock D	190	St. Louis
Ridgeway, William G	190	St. Louis
Ridings, Harold D	042	Cape Girardeau
Ridpath, Carlin A	126	Kansas City
Riechers, Thomas B	074	Washington
Rieger, Frank G	026	Columbia
Ries, Douglas A	190	Oceanside, CA
Rikli, Arthur E	026	Columbia
Riley, Charles T	118	Richmond
Riley, Joel Y	002	St. Louis
Riley, Louis T	190	Sevierville, TN
Riller, Lowell E	125	Kansas City
Rinck, Edward C	214	Nevada
Rinehart, Gregory C	190	St. Louis
Rinehart, Robin L	126	Blue Springs
Riner, Ronald N	190	St. Louis
Ring, Daniel S	195	St. Louis
Ring, Lisa B	190	Bridgeton
Ringer, C. Nelson	042	Cape Girardeau
Riojas, James E	135	Rolla
Riojas, Lisa A	135	Rolla
Rippe, William F	030	St. Joseph
*Ripperger, Kevin L	082	Springfield
Rising, Dean R	082	Springfield
Rispler, David T	058	Jefferson City
Ritter, C. J.	042	Cape Girardeau
Ritter, Carl F	042	Cape Girardeau
Ritter, Hubert A	190	St. Louis
Ritter, John L	082	Springfield
Ritter, R. August, III	042	Cape Girardeau
Ritter, Ray A, Jr.	042	Cape Girardeau
Ritter, Raymond A, Sr.	042	Cape Girardeau
Rizzo, Adolfo E	190	St. Charles
Roa, Necita L	002	St. Louis
Roach, Kevin R	126	Shawnee Mission, KS
Roach, Mona S.I.	126	Kansas City
Robben, G. Garry	190	St. Louis
Robbins, Philip L	190	St. Louis
Robbins, Thomas D	058	Jefferson City
Roberts, Charles C	125	Kansas City
Roberts, Fred F	125	Kansas City
Roberts, Grosvenor G	125	Kansas City
Roberts, Harold K	190	Clayton
Roberts, Howard H	102	Joplin
Roberts, John P	190	St. Louis
Roberts, Jonathan M	058	Jefferson City
Roberts, Perry T	042	Cape Girardeau
Roberts, Phyllis G	030	St. Joseph
*Roberts, Rebecca L	030	Kansas City
Roberts, Shauna R	030	St. Joseph
Roberts, Theodore W	202	Sikeston
Robertson, Frank G	190	Cuba
Robertson, William D	034	Poplar Bluff
Robinett, Wade V	125	Kansas City
Robinow, Jay S	125	Kansas City
Robinson, Arthur W	125	Shawnee Mission, KS
Robinson, David P	026	Columbia
Robinson, Gary L	082	Springfield
Robinson, Gordon H	190	St. Louis
Robinson, Jay G	125	Kansas City
Robinson, Nicholas F	070	Kennett
Robinson, Ronald L	042	Cape Girardeau
Robinson, Van M	198	Marshall
Robinson, William J	125	Overland Park, KS
Rodefeld, Mark D	190	St. Louis
Rodes, Ned D	014	Mexico
Rodgers, Dorothy L	026	Columbia
Rodgers, George H	125	Leawood, KS
Rodgers, Samuel U	125	Kansas City
Rodrigo, Bernardo R	190	St. Louis
Rodriguez, Gregorio L	202	Charleston
Rodriguez, Ubaldo R	190	St. Louis

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*Doctor of Osteopathy

Roehrs, David H	**178**	Sedalia
Roehrs, Marvin E	**198**	Marshall
Rofail, Amin A	**125**	Shawnee Mission, KS
Rogers, Casey	**014**	Mexico
Rogers, David B	**082**	Springfield
Rogers, H. Bryant	**190**	St. Louis
Rogers, James T	**082**	Springfield
Rogers, James D	**082**	Springfield
Rogers, John T	**030**	St. Joseph
Rogers, Joseph Drewr	**082**	Springfield
Rogers, Robert L	**125**	Kansas City
Rogler-Brown, Ginene M	**126**	Overland Park, KS
Roh, Joseph J	**125**	Kansas City
Roh, Lynn H	**125**	Kansas City
Roller, James A	**026**	Columbia
Rollo, John L	**190**	St. Louis
Romaker, Ann M	**125**	Kansas City
Romkema, George E	**190**	St. Louis
Rondinelli, Robert D	**125**	Kansas City
Roper, Charles L	**190**	St. Louis
Rose, Barry A	**125**	Kansas City
Rose, John F	**078**	Rochester, MN
Rosecan, Marvin	**190**	Belleville, IL
Roselman, Michael J	**082**	Springfield
Rosen, Howard M	**125**	N. Kansas City
Rosen, Larry A	**125**	Independence
Rosen, William K	**082**	Springfield
Rosenbaum, Herbert E	**190**	St. Louis
Rosenberg, David S	**190**	Florissant
Rosenbloom, Michael	**190**	St. Louis
Rosenthal, Debra D	**190**	St. Louis
Rosenthal, Randall	**190**	St. Louis
Rosenthal, William N	**125**	Kansas City
Roshan, Bijan	**126**	Kansas City
Ross, Gilbert, Jr.	**026**	Columbia
Ross, Robert M	**125**	Kansas City
Ross, William J	**190**	Bridgeton
Rossiter, Thomas W	**082**	Springfield
Roter, Alexander M	**189**	St. Charles
Roth, Alfred D	**125**	Mission, KS
Roth, John J	**190**	St. Louis
Rother, Paul H	**189**	St. Charles
Rotskoff, Kenneth S	**190**	St. Louis
Rottler, Paul D	**190**	St. Louis
***Rotton, C. Bruce**	**082**	Springfield
Rouse, Ernest T, III	**190**	St. Louis
Rouse, Ernest T	**190**	St. Louis
Roush, Randall D	**190**	Florissant
***Routsong, Rodney T**	**190**	St. Louis
Rowe, Vernon D, III	**125**	Kansas City
Roxas, Generoso P	**189**	St. Charles
Roy, Tapankumar S	**190**	St. Louis
Royce, Debra L	**102**	Sarcoxie
Rozen, Jay I	**125**	Kansas City
Rubin, Brian G	**190**	St. Louis
Rucker, Patrick T	**195**	St. Louis
Rucker, Walter W	**126**	Kansas City
Ruehl, Albert F	**190**	St. Louis
Rues, Lawrence A	**125**	Kansas City
Ruess, Robert W	**042**	Cape Girardeau
Ruff, Paul G	**082**	Springfield
Ruhling, Rudy	**190**	Punta Gorda, FL
Rul-Lan, Carlos D	**002**	Kansas City
Rumpf, Michelle R	**125**	Kansas City
Rumpf, Ronald P	**026**	Columbia
Runez, Manuel W	**158**	Maryville
***Rupright, S. Jon**	**058**	Columbia
Rush, Marvin R	**174**	Ste. Genevieve
Russell, Garth S	**026**	Columbia
Russell, Guy R	**102**	Carl Junction
Russell, James L	**125**	Kansas City
Russell, John J	**042**	Cape Girardeau
***Russell, Robert B**	**042**	Cape Girardeau
Russell, Robert K	**125**	Kansas City
Russell, Steven L	**050**	Kansas City
Rutherford, Barry D	**125**	Kansas City
Rutherford, James L	**190**	St. Louis
Rutledge, Kristie A	**126**	Overland Park, KS
Ruwitch, Joseph F, Jr.	**190**	St. Louis
Ryall, Jo-Ellyn M	**190**	St. Louis
Ryan, David	**078**	Trenton
Ryan, Robert A	**082**	Mission, TX
Ryan, Robert E, Sr.	**190**	Chesterfield
Ryan, Thomas J	**058**	Jefferson City
***Ryan, Timothy J**	**198**	Marshall
Rymer, Marilyn M	**125**	Kansas City
Ryser, Carol A	**125**	Kansas City

S

Sabates, Felix N	**125**	Kansas City
Sabates, Nelson R	**125**	Kansas City
Sabet, Abdollah A	**190**	Ballwin
***Sacha, Robert F**	**042**	Cape Girardeau
Sachar, Jerome D	**190**	St. Louis
Sachar, Leo A	**190**	St. Louis
Sadhu, Vijay K	**026**	Columbia
Saferstein, A. L.	**125**	Shawnee Mission, KS
Safley, Thomas J	**125**	Independence
Saghir, Marcel T	**190**	St. Louis
Saha, Nitai C	**190**	St. Louis
Saha, Sudha R	**190**	St. Louis
Sahebjamei, Tannaz	**126**	Kansas City
Sahota, Pradeep K	**026**	Columbia
Sakmar, Douglas A	**190**	St. Louis
Salanski, Stephen C	**125**	Lee's Summit
Sale, Llewellyn, Jr.	**190**	St. Louis
Salibi, Habbouba	**190**	Chesterfield
Salmon, M. L.	**190**	St. Louis
Salvador, Antonio	**190**	St. Louis
Samet, John M	**190**	St. Louis
Sammon, T. James	**082**	Springfield
Samson, Barry L	**190**	St. Louis
Samudrala, Ramulu	**190**	St. Louis
Samuel, George P	**034**	Doniphan
Samuelson, Thomas S	**125**	Kansas City
Sanchez, Abelardo B	**190**	St. Louis
Sanchez, Jon J	**082**	Springfield
Sanders, Harold L	**026**	Columbia
Sanders, Jack S	**058**	Jefferson City
Sanders, Theodore E	**190**	Ballwin
Sanders, William F	**125**	Kansas City
Sandiford, Patrick	**189**	St. Charles
Sandow, Theodore L	**125**	Kansas City
Sanfelippo, John F	**058**	Jefferson City
Santanello, William M	**190**	Belleville, IL
Santin, Antonio	**002**	Kansas City
Santner, Floyd A	**078**	Marceline
Sargent, Alden P	**202**	Sikeston
Sarma, Anuradha H	**125**	Lee's Summit
Sasser, William F	**190**	St. Louis
Sato, George	**190**	Chesterfield
Sato, Richard W	**190**	Chesterfield
Satterlee, C. Craig	**125**	Kansas City
Sauer, Donald C	**190**	St. Louis
Sauer, Gordon C	**125**	Kansas City
Sauer, James M	**082**	Springfield
Sauer, Paul E	**082**	Springfield
Sauvage, Jacques P	**190**	St. Louis
Savci, Hasan D	**190**	St. Louis
Sawyer, Floyd E	**050**	Ft. Lauderdale, FL
Sawyer, James	**190**	St. Louis
Saxon, Keith G	**125**	Liberty
Scacewater, Rick	**102**	Joplin
***Scanlon, Robert C, II**	**082**	Springfield
Scarborough, Betty F	**125**	Shawnee Mission, KS
Scearce, Robert L	**058**	Jefferson City
Schaaf, Robert O	**030**	St. Joseph
Schaberg, James E	**189**	St. Charles
Schaberg, Kevin B	**190**	Chesterfield
Schaefer, Glennon S	**190**	St. Louis
Schaefer, Stephen A	**198**	Marshall

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*Doctor of Osteopathy

Schaeffer, Edward M Springfield	082
Schaerer, Jacques P St. Louis	190
Schane, Catherine L Springfield	082
Schanzlin, David J St. Louis	190
Schaper, Ernest H St. Louis	190
Scharf, Daniel Kansas City	125
Scharrer, Alan J Lee's Summit	002
Schechter, Marc J Cape Girardeau	042
Scheer, Michael F Columbia	027
Scheibe, Robert G St. Louis	190
Scheible, Robert F St. Louis	190
***Schekorra, Fred W** Camdenton	058
Schell, James A Columbia	026
Scheperle, Mark A St. Louis	190
Scherer, Stephen Kansas City	125
Schermer, Jerrold A Columbia	026
Scherr, David D Jefferson City	058
Scheu, James H St. Peters	190
Schewe, Elmer J Columbia	026
Schierman, William D St. Louis	190
Schiffmacher, Jack E Prairie Village, KS	125
Schillie, Gene A Kansas City	125
Schlafly, Bruce S St. Louis	190
Schlafly, Edward F, Jr. Chesterfield	190
Schlansky, Howard J St. Charles	189
Schlansky, Seymour M St. Louis	190
Schlarman, David E St. Louis	190
***Schlegel, William L** Jefferson City	058
Schleicher, Paul J Kansas City	126
Schlossman, David M Columbia	026
Schlozman, Daniel L Kansas City	125
Schmaltz, Richard A Columbia	026
Schmid, Tania L St. Louis	190
Schmidt, Dennis A St. Louis	190
Schmidt, Edwin H St. Louis	190
Schmidt, Edwin H, III St. Louis	190
Schmidt, Jerome H Jefferson City	058
Schmidt, Maria E St. Louis	190
Schmidt, Martin P St. Louis	190
Schmidt, Thomas L Kansas City	125
Schmiedt, Marcus I St. Petersburg, FL	126
Schmitz, John M Kansas City	125
Schmitz, Ralph A Monett	166
Schnarr, William St. Charles	189
***Schneider, Horace L** Cape Girardeau	042
Schneider, J. Michael Springfield	082
Schneider, Paul G St. Louis	190
Schneider, Robert J St. Louis	190
Schneider, Sally L Chesterfield	190
Schneider, Thomas A St. Charles	189
Schnurr, Thomas C Jefferson City	027
Schoch, Lawrence H Florissant	190
Schoenecker, Perry L St. Louis	190
Schoengarth, Lowell D Columbia	026
Schokker, Johannes Jefferson City	058
Schondelmeyer, R. Wade Columbia	046
Schonfeld, Gustav St. Louis	190
***Schooler, Richard D** Joplin	102
Schoolman, Arnold Kansas City	125
Schopp, Alvin C St. Louis	190
Schottman, Gerhard W Shawnee Mission, KS	125
Schranck, Charles R, Sr. St. Louis	190
Schreiber, David J Alton, IL	190
Schrenk, Loren C St. Louis	190
Schrick, Richard E St. Louis	190
Schroeder, Walter A, Jr. Cape Girardeau	042
Schroer, William C Florissant	002
Schroff, Carle E Springfield	082
Schudy, Martin J Columbia	027
Schuessler, Edward C St. Albans	190
Schuessler, Wolfgang P St. Louis	190
Schuetz, Alfred St. Charles	189
Schuetz, Evelyne G St. Charles	189
Schuh, Marlys E Creve Coeur	190
Schulman, Jeffrey I St. Louis	190
Schultz, Earl R St. Louis	190
Schultz, Irwin St. Louis	190
Schultz, Paul K St. Louis	190
Schulz, Richard C St. Louis	190
Schutz, John P Excelsior Springs	050
Schwartz, Henry G St. Louis	190
Schwartz, Howard R Springfield	082
Schwartz, Howard I Kansas City	125
Schwartzman, Neil R Lebanon	115
Schwarz, Luis H St. Louis	190
Schwarze, Daniel J St. Louis	190
***Schwarze, Robert F** Florissant	190
Schwegler, Robert G Shawnee Mission, KS	125
Schweiss, John F St. Louis	190
Scodary, Daniel J Bridgeton	190
Scott, Andrew Kansas City	125
Scott, C. Alan Marshall	198
Scott, E. David Jefferson City	058
Scott, Elwin P St. Louis	190
Scott, Jamie A Springfield	082
Scott, Joni C Springfield	082
Scott, June Y Kansas City	126
Scott, Kenneth F Clinton	086
Scott, Michael R Springfield	082
Scott, Robert W Springfield	082
Scott, Wendell J Springfield	082
Scowley, John E Richmond	118
Scully, Thomas F St. Louis	190
Seabaugh, Janice L Mexico	014
Seabaugh, William L Cape Girardeau	042
Seaberg, John J, III Columbia	026
Seagrave, Richard A Springfield	082
Seale, Stuart A Springfield	082
***Seals, Larry E** Manchester	195
Sedgwick, William G St. Louis	190
See, W. Mike Columbia	026
Seeck, Linda E Washington	074
Seelig, Robert D St. Louis	002
Segraves, Steven D Kansas City	125
Seiden, Gerald D Kansas City	125
Seitz, Elson F Independence	125
Selhorst, John B St. Louis	190
Seligman, Morris H Chesterfield	002
Selove, Peter T Joplin	102
Sertl, George O St. Louis	190
Sertl, James F St. Louis	190
Sessions, Donald G St. Louis	190
Severance, Michael S Jefferson City	058
Shaeffer, James T Springfield	082
Shafer, Kenneth E West Plains	206
Shagets, Frank W Joplin	102
Shah, Anwar St. Louis	190
Shah, Jitendra P St. Louis	190
Shah, Mahendra S West Plains	206
Shah, Narendra St. Joseph	030
Shah, Ramesh R Joplin	102
Shah, Sheila St. Joseph	030
Shaheen, Eleanor Columbia	026
Shakil, Mohammad Cape Girardeau	042
Shalet, Malcolm F Kansas City	125
Shanahan, Mary P Joplin	102
Shanahan, Philip J Florissant	190
Shands, Courtney, III St. Louis	190
Shane, Ramon A Joplin	082
Shaner, Thomas P St. Louis	190
Shank, Robert E St. Louis	190
Shapero, James A Columbia	026
Shapleigh, John B, II Chesterfield	002
Shaplin, Alfred D Ballwin	106
Sharlow, Joseph W Ste. Genevieve	174
Sharma, Vidya Kansas City	125
Sharp, Ronald J Overland Park, KS	125
Sharp, Stanley P Shawnee Mission, KS	125
Shatley, Miriam J Jefferson City	058
Shatz, Burton A St. Louis	190
Shaw, David A Rolla	135
Shaw, Edward J St. Louis	190

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*Doctor of Osteopathy

Shaw, James T	074	Hermann
Shaw, Richard C	190	St. Louis
Shaw, Robert D	206	Willow Springs
Shea, James G	074	Washington
Sheahon, John A	125	Raytown
Shealy, C. Norman	082	Fair Grove
Shechter, Nathan	125	Kansas City
Sheehan, Michael B	125	Kansas City
Sheehan, Paul J	190	Bridgeton
Sheffner, Paul W	190	St. Louis
Shelden, Russell D	125	Kansas City
Shell, William C	202	Sikeston
Shelley, William C	125	Kansas City
Shelton, Becky R	190	Chesterfield
Shelton, Earl W	190	Lake St. Louis
Shelton, R. Wayne	082	Springfield
Shen, Anthony S	190	St. Louis
Shen, Hang C	195	Chesterfield
Shen, Jerome T	190	St. Louis
Shen, Winston W	190	St. Louis
Shenoy, Surendra	002	Olivette
Sher, Allyn L	026	Columbia
Sheridan, John J	190	St. Louis
Sherman, W. Gary	190	Chesterfield
Sherrod, Duane W	102	Joplin
***Sherrod, Glenn M**	190	Bridgeton
Sherwin, Charles S	190	St. Louis
Sheth, Hemant K	030	St. Joseph
Sheverini, James A	125	Scranton, PA
Shevlin, Charles F	030	Palm Springs, CA
Shieber, William	190	St. Louis
Shields, John B	190	St. Louis
Shields, Lawrence S	082	Springfield
Shields, Steven B	190	St. Louis
Shifrin, Alexander	125	Kansas City
Shimshak, Thomas M	125	Kansas City
Shine, Thomas E	190	St. Louis
Shinn, Michael E	050	Kansas City
***Shipman, Wade M**	082	Springfield
Shitut, Ravindra V	190	St. Louis
Shively, Robert A	190	St. Louis
Shockley, Clarence J	125	Greenwood
Shook, John W	125	Shawnee Mission, KS
***Shoop, Jill E**	082	Springfield
Shopper, Glenn K	125	Kansas City
Shopper, Moisy	190	St. Louis
Shore, Jeffrey L	102	Joplin
Short, Charles D	190	St. Louis
Short, Howard N	074	Washington
Shoss, Milton	042	Hilton Head Island, SC
Shoults, Nicholas F	082	Springfield
Shroff, Kumkum	190	St. Louis
Shuler, Frederick N	125	Kansas City
Shull, G. D.	058	Jefferson City
Shultz, Thomas M	082	Springfield
Shuman, Joseph S	190	St. Louis
Shuter, Eli	190	St. Louis
Shyken, Herman	190	St. Louis
Sicard, Gregorio A	190	St. Louis
Sicat, Alfonso V	110	Warrensburg
Sides, Stanley D	042	Cape Girardeau
Sides, Stephen N	126	Olathe, KS
Siegel, Barry A	190	St. Louis
Siegel, Carl D	125	Kansas City
Siegel, Charles	050	Gladstone
Siegfried, Carla J	190	St. Louis
Siemer, Deanna M	027	Columbia
Siemers, George E	190	Naples, FL
Sigmund, Charles A	190	Bridgeton
Sigmund, Charles J, Jr.	190	St. Louis
Silbergeld, Daniel L	190	St. Louis
Siler, Thomas M	189	St. Charles
***Sill, William**	189	St. Peters
Silliman, York E	030	St. Joseph
Silsby, Harry D	082	Springfield
Silver, Bernd	190	St. Louis
Silver, Donald	026	Columbia
Silverberg, Charles	190	St. Louis
Silvers, L. Michael	125	Kansas City
Silverstein, Steven M	125	Kansas City
Silwance, Lily A	125	Leawood, KS
Simmons, Connie D	042	Cape Girardeau
Simmons, Donald D	125	Kansas City
Simmons, Jess S	102	Joplin
Simmons, John L	125	Cashiers, NC
Simo, Frank	190	St. Louis
Simon, David L	190	St. Louis
Simon, Nathan M	190	St. Louis
Simon, Sanford	125	Kansas City
Simons, Paul S	190	St. Louis
Simowitz, Fredric M	189	St. Charles
Simpson, Albert P	082	Springfield
***Simpson, Floyd D**	082	Springfield
Simpson, Joseph R	190	St. Louis
Sims, William A, Jr.	002	St. Louis
Sincox, Charles H	074	Washington
Singh, Daljeet R	118	Higginsville
Singh, Kuldeep	046	Macon
Singhal, Gokul C	190	St. Louis
Singleton, Charles M, II	125	Kansas City
Singleton, John M, III	125	Kansas City
Singleton, Marvin A	102	Joplin
Siripipat, Pallop	014	Mexico
Sisillo, Sabato	126	Lee's Summit
Sisk, James C	190	St. Louis
Sislen, Donald R	190	St. Louis
Sisson, Richard G	190	St. Louis
Sitzman, Everette T	125	Kansas City
Sitzmann, Bryan L	050	Kansas City
Siu, Kenneth K	058	Jefferson City
Skeins, Edward J, Jr.	082	Springfield
Skelley, Mark J	102	Joplin
Skillman, Robert K	125	Shawnee Mission, KS
Skimming, W. Lee	190	St. Louis
Skinner, John S	190	St. Louis
Sklenar, Donald E	030	St. Joseph
Skrade, Jami	126	Kansas City
Slack, Melinda R	082	Springfield
Slagle, Genelle J	126	Shawnee Mission, KS
Slahorek, George J	135	Ft. Leonard Wood
Slankard, J. Edward	125	Overland Park, KS
Slattery, Michael J	126	Kansas City
Slaughter, Carl R	050	Morrilton, AR
Slaughter, James R	026	Columbia
Slaughter, Larry	026	Columbia
Slentz, Edwin L	125	Shawnee Mission, KS
Slimack, Joseph P	002	Chesterfield
Slocum, Stephen G	190	St. Louis
Sly, Anne K	125	Kansas City
Small, Carolyn P	002	St. Louis
Smalley, Stephen R	125	Kansas City
Smalling, Ronnie G	082	Springfield
Smeltzer, Frederick M	120	Lake Ozark
Smid, Anne A	082	Springfield
Smid, David M	082	Springfield
Smiley, William L	190	St. Louis
Smith, Ann K	126	Kansas City
Smith, Arnold L	026	Columbia
Smith, Arthur B	125	Philadelphia, PA
Smith, Benjamin F	190	St. Louis
Smith, Brenda S	125	Kansas City
Smith, Brian D	002	Chesterfield
Smith, Bruce D	030	St. Joseph
***Smith, C. Daniel**	030	St. Joseph
***Smith, Charles H**	050	Gladstone
Smith, Claude F	206	Willow Springs
Smith, Courtland P, Jr.	070	Kennett
Smith, David Lambuth	125	Kansas City
Smith, Dermott A	190	St. Louis
Smith, Earl E, III	190	Bridgeton
Smith, Edward B	125	Kansas City
Smith, Emily L	190	St. Louis

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*Doctor of Osteopathy

Smith, Gilbert D	034	Poplar Bluff
***Smith, Gregory H**	002	Glencoe
Smith, Howard L	026	Ocean Springs, MS
Smith, Hubert E	125	Kansas City
Smith, Hugh R	190	St. Louis
Smith, J. Ned	026	Columbia
Smith, Katherine W	125	Kansas City
Smith, Kathleen	190	DuQuoin, IL
Smith, Kenneth B	074	Washington
Smith, Kenneth R	206	Bolivar
Smith, Kenneth R, Jr.	190	St. Louis
Smith, Morton E	190	St. Louis
Smith, Patrick A	026	Columbia
Smith, Peter G	190	St. Louis
Smith, Porter	070	Poplar Bluff
Smith, Reid C	125	Kansas City
Smith, Robert W	190	Chesterfield
Smith, Robert W	078	Brookfield
Smith, Roland T	102	Gulfport, MS
Smith, Timothy W	125	Kansas City
***Smith, Toni R**	148	Kirksville
Smith, Victorija L	190	Hazelwood
Smith, W. Russell	102	Carthage
Smith, Wallace B	125	Independence
Smith, William J	086	Windsor
Smoller, Martin B	189	St. Louis
Snavely, Sharon R	125	Overland Park, KS
Snead, William H	082	Springfield
Sneid, David S	125	Kansas City
Snidle, William F	106	Crystal City
Snow, Arthur D, Jr.	125	Shawnee Mission, KS
Snow, Emasue	082	Springfield
Snow, Jon F	082	Springfield
Snowden, Kent L	190	St. Louis
Snyder, Christopher H, Jr.	082	Springfield
Sobky, George H	190	Louisiana
Soghrati, Naser O	126	Kansas City
Soha, Joseph J, Jr.	026	Columbia
Sohn, Richard	190	St. Louis
Solanki, Nareshkumar J	190	Wentzville
Sollars, Eric G	030	St. Joseph
Solomon, Felix G	190	St. Louis
Solomon, Steven L	190	St. Louis
Soltys, Stephen M	026	Columbia
Sommer, Conrad S	190	St. Louis
Sommer, Rand W	002	St. Louis
Somoza, Jose R	050	Kansas City
Soonattrakul, Wuthisak	070	Kennett
Soorya, Narendir T	190	St. Louis
Sopuch, John A	190	St. Louis
Sosebee, Lee A	026	Hot Springs, AR
Sosna, Jacob P	190	St. Louis
Soucy, John C	189	St. Charles
Soundararajan, Vidya	195	St. Louis
Southwick, Christopher L	026	Columbia
Sowash, James J	026	Columbia
Spadaro, James J	190	St. Louis
Spade, Diana J	082	Springfield
Spadone, Donald P	026	Columbia
Spaedy, Tony	026	Columbia
Spake, R. Vanneman	125	Kansas City
Spalding, David L	082	Springfield
Spalding, Donald G	190	St. Louis
Spalding, Wilber B, Jr.	125	Kansas City
Sparkman, Thomas C	042	Cape Girardeau
Spector, Gershon	190	St. Louis
Spellman, Michael J, Jr.	195	St. Louis
Spence, Paul A	042	Cape Girardeau
Spence, Paul R	126	Kansas City
Spence, Thomas H, Jr.	190	St. Louis
Spencer, Donald C	026	Fulton
Speno, Angelo A	190	St. Louis
Spernoga, John F	190	St. Louis
Spewak, Robert D	190	St. Louis
Spies, Barbara J	125	Louisburg, KS
Spinzig, Bruce D	046	Moberly
Spitler, Allen L	042	Cape Girardeau
Spivack, Alan R	190	Chesterfield
Spollen, Linda E	026	Columbia
Sponenberg, Don D	082	Springfield
Sportsman, Weldon L	050	Kansas City
Spradlin, Larry D	125	Kansas City
Sprague, Gita	030	St. Joseph
Spray, Thomas L	190	Philadelphia, PA
Spurgat, Robert M	030	St. Joseph
Spurgeon, Milo J	026	Columbia
Spurlock, Luther D	135	Rolla
Spurney, Joe E	125	Kansas City
Spurny, Otto M	125	Kansas City
Spurrier, Mark H	190	St. Louis
Squitieri, Alphonse J	190	St. Louis
Srivisal, Somnuk	190	St. Louis
St. Joh, Donald R	102	Marshall
Staab, Gerald E	125	Kansas City
Stacey, Wallace R	125	Independence
Stafford, Walter R	190	St. Louis
Stahl, Lloyd D	125	Kansas City
***Stahly, Randall L**	042	Cape Girardeau
Stahr, William D	042	Cape Girardeau
Stallard, Donald J	030	St. Joseph
Stamatis, John J	082	Springfield
Standiford, Steven B	026	Columbia
Stanford, Carol A	125	Kansas City
Stanley, Brad K	002	Independence
Stanley, Charles G	125	Kansas City
Stanley, John H	125	Kansas City
Stansfield, Julie D	027	Columbia
Stark, Karl R	125	Kansas City
Stark, William H	125	Kansas City
Starke, Keith M	190	St. Louis
Starks, Gregory C	125	Kansas City
Starr, Steven K	125	N. Kansas City
Staten, Stephen F	190	St. Louis
Statland, Harry	125	Kansas City
Statland, Morris	125	Shawnee Mission, KS
Stauffer, Larry K	058	Jefferson City
Stauffer, Robert C	102	Joplin
Stavrides, Pete D	190	St. Louis
Steele, Jack T	190	Bridgeton
Steele, Mark T	002	Kansas City
Steenbergen, Michael	058	Jefferson City
Steffen, Lawrence F	125	Shawnee Mission, KS
Steiling, Sylvia A	190	St. Louis
Steiman, Barry	189	Creve Cocur
Stein, Bernard	102	Joplin
Stein, James C	195	Webster Groves
Steinberg, Franz U	190	St. Louis
***Steinbrecher, Janis M**	125	Lee's Summit
Steiner, Alexander J	190	St. Louis
Steiner, Mark A	195	St. Louis
Steiner, Marvin P	125	Independence
Steinhaus, David M	125	Kansas City
Stelmach, Walter J	125	Kansas City
Stenberg, Michael D	002	Kansas City
Stephen, C. Ronald	190	Chesterfield
Stephenson, Hugh E	026	Columbia
Sterkel, Barbara B	190	St. Louis
Sterkel, Richard L	190	St. Louis
Stevens, Damion	126	Fairway, KS
Stevens, Edward M	030	St. Joseph
Stevens, Sheridan	125	Independence
Stevens, Stacy C	126	Kansas City
Stewart, Angela R	026	Columbia
Stewart, Harry A	125	Shawnee Mission, KS
Stewart, James G	190	St. Louis
Stewart, James L	050	Weatherby Lake
Stewart, L. Paul	190	St. Louis
Stewart, Robert B	082	Springfield
Stiaszny, Louis K	125	Kansas City
Stickle, Arthur W	190	St. Louis
Stickley, Louis P	190	St. Louis
Stiles, Michael C	125	Leawood, KS

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*Doctor of Osteopathy

Stiles, Michella M	Kansas City	125
*Stillie, G. Donald	Kansas City	125
Stillings, Wayne A	St. Louis	190
Stith, John A	St. Louis	190
Stitt, Ronald W, Jr.	Kansas City	125
Stockton, Raymond W	Shawnee Mission, KS	125
Stockwood, Robert C	Sedalia	178
Stoecker, Willeford J	Cape Girardeau	042
Stoecker, William V	Rolla	135
Stohr, Paul E	St. Charles	190
Stokes, Douglas L	St. Joseph	030
Stokes, James M	St. Louis	190
Stoliar, Bruce	St. Louis	190
Stone, Kenneth D	Sikeston	202
Stoneman, William, III	St. Louis	190
Stoops, Stephen L	Kansas City	125
Stout, Carl N	Independence	125
Stoy, Robert P	Columbia	026
Stradford, H. Todd	Columbia	026
Strain, Herb A	Kansas City	125
Strasberg, Steven M	St. Louis	190
Stratemeier, Edward H	Blue Springs	125
Straub, David L	Joplin	102
Strauss, Carl F	Kansas City	125
Strecker, William B	St. Louis	190
Stricker, William E	Rolla	135
Strickland, James C	St. Louis	190
Stringer, Kenton L	Aurora	166
Stringfield, Barry D	Springfield	082
Strobach, Kurt F	St. Louis	190
Stroble, Mark	St. Louis	190
Stromberg, Brent V	St. Louis	190
Stromberg, Eric D	Kansas City	125
Stronach, Linda L	St. Louis	190
Strong, Alexandra J	Kansas City	125
Stronsky, David	St. Louis	190
Stroud, Malcolm H	Dallas, TX	190
Stryker, William I	Osprey, FL	190
Stuart, Byron M	Boonville	026
Stuart, Daniel D	Brunswick	046
Stuart, Wallace	Crestwood	190
Stubbs, Thomas R	West Plains	206
Stuber, Robert R	St. Joseph	030
Stuckmeyer, James A	Blue Springs	125
Stuerman, Lawrence G	Louisiana	150
Stufflebam, Robert E	Springfield	082
Stuppy, Mark S	Springfield	082
Sturtevant, Harwood N	Springfield	082
Su, Charles Y	Merriam, KS	126
Su, Philo S	Jefferson City	058
Suarez, Alberto	Lee's Summit	125
Suarez-Solar, Pedro L	Ballwin	195
Suarez-Solar, Pedro L	St. Charles	189
Subramanian, S	Carthage	102
Sudekum, Joseph M	St. Louis	190
Sueper, Robert H	St. Louis	190
Sugarbaker, Everett D	Jefferson City	058
Sugarbaker, Stephen P	Jefferson City	058
Sullivan, Bradley H	Kansas City	125
Sullivan, Christine	Overland Park, KS	125
Sullivan, Clement J	St. Louis	190
Sullivan, Dan T	Springfield	082
Sullivan, David M	Springfield	082
Sullivan, John A	Springfield	082
Sullivan, William W	St. Louis	190
Sultan, Tipu	Florissant	190
Sumer, Emel A	Bridgeton	190
Summers, John B	St. Louis	190
Summers, Joseph S	Jefferson City	058
Summers, Thomas F	Olney, IL	190
Sun, Belinda	Fairway, KS	126
Sundaresan, Sudhir	St. Louis	002
Sunderji, Shiraz	St. Louis	190
Sundstrom, Frank D	Springfield	082
Sundt, Thoralf M	St. Louis	002
Sunshine, Herbert	St. Louis	190
*Super, David L	St. Louis	195
Suseela, Dasari	Kansas City	125
Susi, Jesse G	St. Louis	190
Sutherland, Charles J	St. Louis	190
*Suthoff, Jim	Joplin	102
Sutphen, Eric J	St. Louis	190
Sutter, Richard A	St. Louis	190
Sutton, Matthew B	Prairie Village, KS	126
Sutton, Trevor S	St. Louis	002
Suva, Morfeo M	Springfield	082
Suvan, R	Poplar Bluff	034
Suwannasri, Rudee	St. Louis	190
Svancarek, William P	St. Louis	190
Swaim, Truett	Blue Springs	125
Swaney, Charles M	Columbia	026
Swango, John S	Springfield	082
Swanson, Robert G	Ballwin	195
Swaykus, Bernard T	Bridgeton	190
*Swearingen, Fritz W	Kansas City	126
Sweeney, Michael J	Kansas City	125
Sweeney, Thomas P	Springfield	082
Sweet, Robert A	Springfield	082
Sweiger, James H	Plattsburg	054
Swinfard, Ronald W	Columbia	026
Switzner, Diane L	Springfield	082
Sylvanovich, W. Richard	St. Louis	190
Szabados, Ernest D	Independence	125
Szewczyk, Michael J	Columbia	026
Szoko, Edward	St. Louis	190
Szymanski, Stanley R	Macon	078

T

Taege, Alan J	St. Joseph	030
Tailor, Chandrakant C	St. Louis	190
Takacs, Robert J	Kansas City	125
Takagi, Brian K	Rolla	135
Talbert, Clifford R	Cape Girardeau	042
Talbott, Lawrence B	Kansas City	125
Tamblyn, Claire L	Tubac	125
Tang, Teodoro	Salem	135
Tanner, Christina E	Springfield	082
Tanner, John P	Fairway, KS	125
Tanner, Robert H	Jefferson City	058
*Tanner, Scott W	Jefferson City	058
Tanphaichitr, Kongsak	St. Louis	190
Tansuwan, Chukiat	St. Louis	190
Taormina, Marc K	Independence	125
Tariq, Manzoor A	Chesterfield	195
Tate, Kara L	Kansas City	125
Tatini, Paparao	St. Louis	190
Taute, Hermann	St. Louis	190
Taylor, Eugene D	St. Louis	190
Taylor, John R.W.	Kansas City	125
Taylor, Joseph A	Columbia	027
Taylor, Leon A	Jefferson City	058
Taylor, Philip W	Cape Girardeau	042
Taylor, Steve J	Mexico	014
Taylor, William K	Springfield	082
Teague, J. Lynn	Columbia	026
*Tedrick, Phillip D	Cape Girardeau	042
Teff, Richard J	Columbia	027
Tegtmeyer, Chris	Lebanon	115
Tekwani, Hiralal T	St. Louis	190
Tella, Nalini	Kansas City	125
Tellerman, Barbara J	Columbia	026
Templer, Jerry W	Columbia	026
Tendai, Mark M	Springfield	082
Tenorio, Arturo A	Stanberry	158
Tenorio, Gene	Springfield	082
Tenorio, Genoveva	Albany	158
Tepper, Arnold	St. Louis	190
Ternberg, Jessie L	St. Louis	190
Terry, Boyd E	Columbia	026
Terry, Brian	St. Louis	195
Terry, James F	Springfield	082

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*Doctor of Osteopathy

Terry, James W	**042**	Cape Girardeau
Terschluse, David A	**190**	Bridgeton
Tess, Allen F	**190**	Florissant
Tessier, John E	**190**	St. Louis
Tetalman, Bruce I	**030**	St. Joseph
***Tewis, Huey D**	**042**	Cape Girardeau
Thaker, Jayesh	**126**	Kansas City
Thal, Sanford M	**190**	St. Louis
Thalblum, Harvey	**125**	Kansas City
Thale, Thomas R	**190**	Ballwin
Thawley, Stanley E	**190**	St. Louis
Theard, Marie A	**195**	Creve Coeur
Theby, Janet E	**058**	Eldon
Thedinger, Bradley S	**125**	Kansas City
Theel, Otto W, Jr.	**125**	Shawnee Mission, KS
Thesing, John A	**125**	Lenexa, KS
Thibeault, Donald W	**125**	Kansas City
Thiel, J. Allen	**190**	St. Louis
Thiele, Belmont R	**190**	Las Vegas, NV
Thiele, Otto K	**189**	St. Charles
Thierauf, Charles G	**190**	St. Louis
Thies, Jerome H	**214**	Osceola
Thoma, George E, Jr.	**190**	St. Louis
Thomas, Alexis G	**125**	Kansas City
Thomas, Christopher Y	**125**	Shawnee Mission, KS
Thomas, Deborah G	**042**	Cape Girardeau
Thomas, F. Anthony	**050**	Kansas City
Thomas, Horace E	**026**	Columbia
Thomas, J. Regan	**190**	St. Louis
Thomas, James J	**125**	Kansas City
Thomas, Leslie D	**050**	N. Kansas City
Thomas, Maria D	**082**	Springfield
Thomas, Matthew A	**190**	St. Louis
***Thomas, Norvin E**	**014**	Mexico
Thomas, Robert M	**026**	Columbia
Thomasson, David D	**082**	Springfield
Thomasson, Jeffrey L	**190**	St. Louis
Thomasson, Mary W	**190**	St. Louis
Thompson, David E	**125**	Independence
Thompson, F. Gregg	**030**	St. Joseph
Thompson, Frederick E	**050**	Liberty
Thompson, Frederick L	**214**	Nevada
Thompson, M. Bryant	**190**	Chesterfield
Thompson, Paul D	**042**	Cape Girardeau
Thompson, Robert F	**125**	Kansas City
Thompson, Scott W	**125**	Kansas City
Thondapu, Vanaja R	**026**	Iowa City, IA
Thornton, F. Parker, III	**125**	Kansas City
Thornton, Fred H	**202**	Sikeston
Thornton, Michael K	**174**	Ste. Genevieve
Thorpe, William P	**042**	Cape Girardeau
Throne, Ben J	**125**	Kansas City
Thurman, Jerome E	**195**	St. Louis
Thurmann, Manfred	**190**	Chesterfield
Tice, Wayne K	**125**	Lee's Summit
Tichenor, Robert W	**190**	Fenton
Tiefenbrunn, Sharon F	**190**	St. Louis
Tiemann, James H	**126**	Lee's Summit
Tietjen, Fred O	**120**	Osage Beach
Till, Bennie N	**034**	Poplar Bluff
Tillema, David A	**125**	Kansas City
Tillinghast, Jeffrey P	**190**	St. Louis
Tillman, Mary A	**190**	St. Louis
Tilson-Mallett, Nancy R	**125**	Kansas City
Tilzer, Seth	**190**	Florissant
Tindall, Robert N	**190**	Spirit Lake, IA
Tinger, Alfred	**195**	Ellisville
Tinsley, John C	**026**	Columbia
Tio, Liep T	**206**	West Plains
Tiojanco, Milagros E	**125**	Kansas City
Tippett, Jack C	**190**	St. Louis
***Tipton, Richard J**	**042**	Cape Girardeau
Titterington, Frank W	**125**	Kansas City
Tobey, Albro C, Jr.	**190**	St. Louis
Tobin, Garry S	**190**	St. Louis
Tobin, Gregory A	**042**	Cape Girardeau
Tobin, Marla J	**118**	Higginsville
Tobin, Robert F	**030**	St. Joseph
Tobler, Jerry	**190**	St. Louis
Tobler, Randall W	**190**	St. Louis
Tolan, Robert W, Jr.	**195**	St. Louis
Tombridge, Thomas L	**082**	Springfield
Tominack, Rebecca L	**190**	St. Louis
Tomlinson, David L	**125**	Kansas City
Tompson, Robert V	**046**	Moberly
Torin, Bernice A	**190**	St. Louis
Torontow, R. John	**214**	Nevada
Torrence, Ralph J	**190**	Chesterfield
Torres, Paul	**050**	Kansas City
Totty, William G	**190**	St. Louis
Toubes, Daniel B	**125**	Kansas City
Towle, Daniel J	**125**	Kansas City
Trachtenberg, Jeffrey D	**195**	East Alton, IL
Trammell, Lee W	**026**	Columbia
Traxel, William L	**034**	Poplar Bluff
Treadwell, Randall E	**190**	Chesterfield
Trecha, Randal R	**026**	Columbia
Treiman, Robert C	**190**	St. Louis
Trentham, Orin P, III	**102**	Joplin
Trevor, Richard P	**125**	Kansas City
Triantafillou, Anastasios	**190**	St. Louis
Trimble, George X	**125**	Kansas City
Trimmer, Jeanne M	**190**	St. Louis
Trinidad, Hermanito R	**078**	Chillicothe
Triplett, Daniel A	**050**	Liberty
Triska, Roland A	**190**	St. Louis
Troeh, Melvin R	**125**	Independence
Troop, Bryan R	**190**	St. Louis
Trotta, Philip C	**190**	St. Louis
Trotter, Francis O, Jr.	**190**	Carrollton
Trotter, W. Yates	**082**	Springfield
Trowbridge, Ellsworth	**125**	Sun City, AZ
True, James D	**050**	Kansas City
Trueblood, Alva C	**190**	St. Louis
Trueblood, Michael C	**042**	Cape Girardeau
Trugly, Edith S	**190**	St. Louis
Trumbower, William D	**026**	Columbia
Tsang, John L	**082**	Honolulu, HI
Tschudin, Garland	**190**	St. Louis
Tsifutis, Argyrios A	**190**	St. Louis
Tucker, Dolores R	**190**	Chesterfield
Tucker, George L	**190**	Chesterfield
Tucker, Leslie E	**074**	Washington
Tucker, Robert E	**190**	St. Louis
Tumanut, Benesto F	**050**	Gladstone
Tungsiripat, Soros	**070**	Kennett
Tuohy, Gerald F	**125**	Kansas City
Tuohy, Mary Ka	**125**	Overland Park, KS
Turano, William L	**125**	Raytown
Turfboer, Robert	**102**	Greenville, NC
Turgeon, Ronald P	**190**	St. Louis
Turnbaugh, Thomas R	**058**	Jefferson City
Turner, Glenn O	**082**	Springfield
Turner, James D	**074**	Washington
Turner, Kirby L	**034**	Poplar Bluff
Turner, Marc A	**125**	Leawood, KS
Turner, Michael L	**034**	Poplar Bluff
***Turner, Timothy T**	**002**	Barrington, IL
Turner, William A	**214**	Nevada
Tutera, Dominic F	**125**	Kansas City
Tuteur, Peter G	**190**	St. Louis
Tuttle, Jay F	**138**	Creve Coeur
Twedell, Donald L	**190**	Chesterfield
Twyman, Richard A	**125**	Shawnee Mission, KS
Tyler, Thomas D	**118**	Lexington
Tze, Anthony A	**195**	St. Louis

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*Doctor of Osteopathy

U

Uchiyama, Robert C	190	Chesterfield
Uhlemann, John H	189	St. Charles
Uhlemeyer, Henry A	190	St. Louis
Uhrig, Jack R	198	Marshall
Uketui, Ozoemenam I	030	St. Joseph
Umar, Ibrahim S	189	St. Peters
Umbarger, Bradley	126	Bonnor Springs, KS
Underwood, Dick H	125	Leawood, KS
Underwood, Johnson, III	050	Kansas City
Ungvari, Joseph C	190	St. Louis
Unwin, Donald R	190	St. Louis
*Upton, Gary L	026	Columbia

V

Vacca, Joseph B	190	St. Louis
Vadlamani, S. M.	190	St. Louis
Vajaranant, Manit	118	Lexington
Valach, Frank J	190	St. Louis
*Vale, Janett A	125	Leawood, KS
Vale, Janie R	026	Columbia
Valera, Salvador S	030	St. Joseph
Vallurupalli, Vijayalakshmi	190	Bridgeton
Valtierra, Cesar A	190	Ballwin
Valuck, Richard P, Jr.	150	Hannibal
Valverde-Mejia, Mary J	202	Sikeston
Van Ambur, Albert L, III	190	Chesterfield
Van Bibe, James T	125	Independence
Van Bure, Wilbur D	002	Kansas City
Van Buskir, William C	125	Shawnee Mission, KS
Van Dyk, Elmer H	178	Sedalia
Van Norma, Robert T	190	St. Louis
Van Osdo, Kelvin D	082	Springfield
Van Ry, Jacques S	190	Bridgeton
Van Voor, Catherine M	026	Columbia
Van Way, Charles W, III	125	Kansas City
Van Zante, Niko A	214	Osceola
Vandewalker, Mark L	026	Columbia
Vandivort, Paul M, Jr.	190	St. Louis
Vandover, John T	190	St. Louis
Vani, John N	126	Fairway, KS
Vannier, Michael W	190	St. Louis
VanGoidsenhoven, Guy E	190	St. Louis
*Vardakis, Gregory M	126	Kansas City
Vardeleon, Roger V	190	St. Louis
Vargas, Theodoro C	190	Pacific
Varma, Devendra K	034	Poplar Bluff
Varvares, Mark A	002	St. Louis
Vaughn, James W	125	Overland Park, KS
Vaughters, Frank M	125	Kansas City
Vazquez, Jose L	002	St. Louis
Veitch, John M	102	Joplin
Velander, Robert D	125	Kansas City
Velasco, Ernesto T	190	St. Louis
Vellek, Mark J	026	Columbia
Velloff, Tara M	126	Kansas City, KS
Venable, H. Phillip	190	St. Louis
Venneman, Charles R	125	Kansas City
Ver Dugh, Ammon L	125	Lee's Summit
Vera, Enrique	125	Ft. Myers, FL
Verde, Julian N	190	St. Louis
Vergara, Gerardo G	125	Kansas City
Verona, Montgomery A	082	Springfield
Verzola, Eufemio G	106	Herculaneum
Vest, James C	190	St. Louis
Vest-Mason, Mary	195	St. Louis
*Vialle, Gene M	125	Kansas City
Viamontes, Jorge A	190	St. Louis
Vibulakaopun, Pairat	138	Bonne Terre
Vickar, Garry M	190	Florissant
Vidals, Victor G	125	Kansas City
Vierling, Stephen E	190	St. Louis
Viers, Wayne A	190	St. Louis
Vietti, Teresa J	002	St. Louis
Vighi, James R	189	St. Charles
Vigneron, Eugene A	058	Jefferson City
Vijungco, Jose G	190	St. Louis
Vilar, Ester G	190	St. Louis
Villahermosa, Juanito L	010	Savannah
Villamar, Elizabeth N	190	St. Louis
Villanueva, Angela A	125	Overland Park, KS
Villarama, Antonio P	190	High Ridge
Vilmer, Charles E	050	N. Kansas City
Vilmer, Stephen E	050	N. Kansas City
Vinjamuri, Madhav B	002	St. Louis
Vinyard, Jack L	102	Joplin
Viril, Leonardo C	125	Kansas City
Vitale, Anthony J	190	Chesterfield
Vitale, Nicholas S	190	Florissant
Vitale, Stephen J	190	Ballwin
Vitale, Thomas J, Jr.	190	St. Louis
Vivian, Gary D	189	St. Peters
Viviano, Joseph G	190	Glendale
Vo, Thuy-Lieu T	190	St. Louis
Voelker, Donald J	026	Columbia
Vogel, Arthur P	125	Shawnee Mission, KS
Vogel, Curt M	026	Columbia
*Vogelsang, Judith K	125	Kansas City
Vollmer, Dennis G	190	St. Louis
Voth, Harold W	125	Shawnee Mission, KS
Vournas, Christopher G	190	St. Louis
Vournas, George C	190	Bridgeton

W

Wachter, Ronald M	082	Springfield
Waddell, Kenneth E	082	Pleasant Hope
Waddell, Thomas H	125	Kansas City
Waddle, Jean P	190	St. Louis
Wade, Kim C	125	Kansas City
Wade, Larry A	082	Springfield
Wade, Scott A	030	St. Joseph
Wadley, John J	178	Sedalia
Wadlow, Ernest E	030	Glendale, AZ
Waeckerle, Joseph F	125	Leawood, KS
Wagan, Primitiva C	190	St. Louis
Waggoner, Charles M	026	Marco Island
Waggoner, Sharon E	030	St. Joseph
Wagman, Richard	195	St. Louis
Wagner, Daniel G	002	Chesterfield
Wagner, John R	190	St. Louis
Wakefield, Mark R	027	Columbia
Wakeman, Newt, Jr.	082	Springfield
Wald, Stanley M	190	St. Louis
Waldby, Gail E	078	Huron, SD
Walden, James M	125	Kansas City
Waldo, Carolyn M	126	Kansas City
Waldschmidt, Mike L	125	Liberty
Walentik, Corinne	190	St. Louis
Walentynowicz, James E	190	St. Louis
Walker, Ambrose T	206	Springfield
Walker, Andrew	150	Hannibal
Walker, Francis S	190	St. Louis
Walker, Gary K	082	Springfield
Walker, Gregory E	125	Independence
Walker, Harvey, Jr.	190	St. Louis
Walker, Howard S	190	St. Louis
Walker, J. Leslie	190	St. Louis
Walker, Melvin O, Jr.	082	Springfield
Walker, Orville C	125	Independence
Walker, Rebecca S	190	Blandon
Walker, William M	082	Rogersville
Wall, Harry C	125	Shawnee Mission, KS
Wall, Joe A	206	Houston
Wall, Leonard A	125	Kansas City
Wall, Norman R	082	Springfield
Wallace, Darryl L	125	Kansas City
Walley, Lynn J	150	Hannibal
Walline, T. Andrew	125	Kansas City
Walls, Joseph T	026	Columbia

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*Doctor of Osteopathy

Walls, Kelvin	125	Independence
Walsh, Barbara A	190	St. Louis
Walsh, James W	190	St. Louis
Walsh, Richard J	030	St. Joseph
Walter, William L	190	St. Louis
Walters, Frederick P	190	St. Louis
Walton, J. Douglas	202	Sikeston
Walton, Patrick J	125	Kansas City
Waltz, James R	050	Liberty
Walz, Bruce J	190	St. Louis
Wan, Shaw P	135	Rolla
Wang, Po W	195	St. Louis
Wankum, Robert P	058	Jefferson City
Wantuck, Donald K	082	Springfield
Warady, Bradley A	125	Kansas City
Ward, Joe W	118	Lexington
Ward, Mark	102	Joplin
Waring, J. Michael	125	Kansas City
Warren, Ronda Lynn	126	Kansas City, KS
Wasserman, Gary M	190	St. Louis
*Wasserman, Gary S	125	Kansas City
Wasserman, Mark S	190	St. Louis
Waterman, Franklin M	050	Overland Park, KS
Waters, Hugh R	190	Chesterfield
Wathanacharoen, Suchint	125	Kansas City
Watkins, George L	138	Rancho Santa Fe, CA
Watson, Richard A	030	St. Joseph
Watson, Tom F	082	Springfield
Watson, Trevor F	026	Columbia
Watts, Byron E	058	Jefferson City
Watts, Samuel M	166	Mt. Vernon
Wax, Martin B	190	St. Louis
Waxelman, Roger J	190	Ballwin
Waxman, Jane Z	125	Lenexa, KS
Waxman, Joel E	082	Springfield
Wayne, Sherwyn J	190	St. Louis
*Weaver, Bruce E	026	Columbia
Weaver, Mark E	082	Springfield
Weaver, Michael L	125	Kansas City
Weaver-Osterholtz, Dana J	026	Columbia
Webb, Harry E	125	Kansas City
*Webb, James J	102	Joplin
Webb, James P	082	Springfield
Webb, John M	050	Kansas City
Webb, Karen B	190	St. Louis
Webb, Paul B, Jr.	190	St. Louis
Webber, William B	190	Ithaca, NY
Weber-Bornstein, Nancy	042	Cape Girardeau
Weide, Allan R	050	N. Kansas City
Weiford, Edward C	125	Shawnee Mission, KS
Weigand, Robert T	030	St. Joseph
Weihl, Todd K	195	Belleville, IL
Weiler, Thomas J	190	St. Louis
Weinand, Ernest E	030	Tucson, AZ
Weinberger, Phillip C	110	Warrensburg
Weinstein, Charles L	125	Kansas City
Weinstein, David L	190	St. Louis
Weinstein, Stephen H	026	Columbia
Weinstock, Leonard B	190	St. Louis
Weir, Don C	190	St. Louis
Weir, Robert K	125	Kansas City
Weir, Royal A	190	Ballwin
Weis, Ronald R	125	Kansas City
Weise, Marc W	190	St. Louis
Weiss, Alan N	190	St. Louis
Weiss, Howard	190	St. Louis
Weiss, James J	058	Jefferson City
Weiss, James M	026	Columbia
*Weiss, Randy B	102	Joplin
Weiss, Stuart	190	St. Louis
Weldon, Virginia V	190	St. Louis
Wells, Donald E	125	Atlantic Beach, FL
Wells, Samuel A, Jr.	190	St. Louis
Welsh, Jon A	174	Perryville
Welsh, Laurence C	190	St. Louis
Welsh, Thomas E, III	014	Mexico
Welter, Eugene S	125	Lee's Summit
Weltmer, John B, Jr.	190	St. Louis
Welton, Stephen T	202	Sikeston
Wempe, George R	158	Rio Verde, AZ
Wempe, Michael J	030	St. Joseph
Wenger, Jill L	126	Kansas City
Wenneker, Alvin S	190	St. Louis
Wenner, Herbert A	125	Merriam, KS
Werner, Dean F	050	Kansas City
Werner, F. Scott	050	Kansas City
Werner, Franklin C	050	Liberty
Werner, William A	190	St. Louis
Werth, Joseph A	058	Jefferson City
*Wescott, Thomas P	110	Holden
West, Joseph W	190	Kirkwood
Westcott, Bruce R	042	Cape Girardeau
Westerfeld, Roy A	189	St. Charles
Westerman, Robert N	190	St. Louis
Westfall, Scott G	190	Chesterfield
Westfall, Susan H	190	Chesterfield
Westgate, Steven J	026	Columbia
Westhoff, David D	058	Jefferson City
Weston, Kenneth G	026	Columbia
Westrich, David J	042	Cape Girardeau
Westrup, Ellsworth A	190	Eureka
Wetzel, C. Robert	086	Clinton
Wetzel, Gus S	086	Clinton
Wexler, Stephen A	190	St. Louis
Weyerich, Noel F	190	St. Louis
Weyman, Philip J	190	Chesterfield
Wheeler, Charles B	125	Kansas City
Wheeler, Eden	125	Independence
Wheeler, Paul D	050	Liberty
Wheeler, Robert L	214	Harrisonville
Whitacre, Marc M	125	Kansas City
Whitaker, James H	125	Kansas City
White, Bruce I	190	St. Louis
White, Charles H	125	Shawnee Mission, KS
White, David S	120	Lake Ozark
White, Eugene F	135	Rolla
White, Harry H	026	Columbia
White, Newton B	190	St. Louis
White, Russell D	166	Aurora
White, William E	125	Kansas City
White, William L	125	Kansas City
Whitener, Miles C	190	St. Louis
Whiteside, Leo A	190	Bridgeton
Whiting, Richard B	190	St. Louis
Whitlock, C. Courtney	082	Springfield
Whitman, Daniel S	125	Kansas City
Whitmore, J. Stewart	125	Washington, NC
Whitt, Stevan P	027	Columbia
Whittaker, Thomas J	126	Independence
Whitten, J. Stephen	042	Cape Girardeau
Whitten, M. Foster	102	Carthage
Whittico, James M	190	St. Louis
Wiant, James R	190	St. Louis
Wible, Jerry C	082	Springfield
Wice, Martin B	190	St. Louis
Wicklund, Brian M	125	Kansas City
Wiegand, Herbert C	190	St. Louis
Wiele, Kimberly N	190	St. Louis
Wienke, Eugene C	190	St. Louis
Wientzen, Arthur S	125	Kansas City
Wiggins, Stanley D	082	Springfield
Wilbers, Raymond H	014	Mexico
Wilbois, Ronald P	190	St. Louis
Wilcox, Dennis M	125	Leawood, KS
Wild, Alan P.	190	Chesterfield
Wiles, Stephen B	125	Kansas City
Wilhelm, Warren F	125	Lake Ozark
Wilhite, Tria K	150	Shelbyville
Wilkins, Michael S	125	Kansas City
Wilkinson, David	190	St. Louis
Wilkinson, Everett A	125	Prairie Village, KS
Wilkinson, Linda	125	Kansas City

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*Doctor of Osteopathy

Willcoxon, Robert L	102	Joplin
Williams, Carol F	190	St. Louis
Williams, Craig W	042	Cape Girardeau
Williams, Fred	026	Columbia
Williams, John W, 1V	082	Springfield
Williams, Joseph	190	St. Louis
Williams, Joseph C	125	Shawnee Mission, KS
Williams, Kathleen M	125	Kansas City
Williams, Paul A	002	St. Louis
Williams, R. Jerome, Sr.	190	St. Louis
***Williams, Robert J**	030	St. Joseph
Williams, Roy J, Jr.	190	St. Louis
Williams, Starks J	125	Kansas City, KS
Williamson, Blake J	125	Overland Park, KS
Williamson, George L	050	Phoenix, AZ
Williamson, Paul S	002	Kansas City
Willis, Deanna R	027	Columbia
Willman, Charles R	030	Springfield
Willman, Martin L	189	St. Charles
Willman, Vallee L	190	St. Louis
Willoughby, Jean B	125	Kansas City
Wills, Theodore E	026	Columbia
Willumsen, Henry C	030	St. Joseph
Wilson, Charles F	042	Cape Girardeau
Wilson, David E	050	Smithville
Wilson, George P	026	Columbia
Wilson, J. Mark	082	Springfield
***Wilson, James W**	082	Springfield
Wilson, Roy E	082	Springfield
Wilson, Timothy A	050	Kansas City
***Wilson, W. Timothy**	082	Springfield
Wilson, William T	125	Independence
Wilt, David A	125	Kansas City
Wiltz, Laurie D	126	Kansas City
Wilucki, Melvin R	190	St. Louis
Wimmer, Warren J	190	Florissant
Windmiller, M. Eugene	026	Columbia
Windsor, Charles E	190	St. Louis
Winer, Herbert J	125	Kansas City
Winer, Nathaniel	125	Kansas City
Winkelmann, Susan E	026	Columbia
Winkelmeyer, William K	026	Columbia
Winkler, Terry	082	Springfield
Winn, George W	026	Boonville
Winnacker, John L	026	Columbia
Winsky, Arlen D	082	Springfield
Winter, Tyrus D	190	St. Louis
Winton, Mark D	058	Jefferson City
Wipfler, Earl J	189	St. Charles
Wirths, Kimberly M	082	Springfield
Wise, George W	125	Shawnee Mission, KS
Wise, Morris F	125	Kansas City
Wissner, Seth E	190	St. Louis
Withrow, Donald	190	St. Louis
Withrow, John B	050	Kansas City
Witt, Clyde M	190	Washington
Witten, David M	026	Columbia
Wittgen, Catherine	195	St. Paul, MN
Wittgen, Edward M	190	St. Louis
Wittmer, Marc R	082	Springfield
Wittmer, Samuel C	082	Springfield
Woeltje, Keith F	190	St. Louis
Wogahn, Brent M	126	Raytown
Wolf, Jack W	125	Kansas City
Wolf, Marion L	082	Springfield
Wolf, Mitchel L	190	St. Louis
Wolfe, Edward M	190	St. Louis
Wolfe, James B	082	Springfield
Wolfe, John E	082	Springfield
Wolff, Dolores P	190	St. Louis
Wolff, Gerald A	190	St. Louis
Wolff, Harold D	190	St. Louis
Wolff, Ray J	190	Bridgeton
Wolski, James R	082	Springfield
Won, Russell	190	St. Louis
Wonder, Donald	208	Branson
Wong, George F, 111	082	Springfield
Wood, John A	190	Chesterfield
Wood, Thomas O	034	Poplar Bluff
Woodard, Pamela K	195	Clayton
***Woods, Brenda L**	058	Jefferson City
Woods, Gerald M	125	Kansas City
Woods, John J, Jr.	190	St. Louis
Woodson, Mark E	190	St. Louis
Woodward, William W	125	Holiday Island, AR
Woody, Mary Therese	126	Kansas City
Woody, Matthew B	126	Kansas City
Wool, Gerald	190	St. Louis
Wooldridge, Wilfred E	082	Springfield
Woolery, William G	178	Sedalia
Woolridge, David	126	Kansas City
Woolsey, Joyce E	190	St. Louis
Wooten, Michael B	082	Springfield
Workman, Charles E	050	Mission, KS
Workman, George M	074	Hermann
Wortmann, Robert F	125	Hilton Head Island, SC
Wotawa, William J	190	St. Louis
Woy, George H	050	N. Kansas City
Wright, Andy J	082	Springfield
***Wright, James C**	174	Perryville
Wright, Jeffrey M	190	St. Louis
***Wright, Michael D**	030	St. Joseph
Wright, R. P.	125	Pittsburg, PA
***Wright, Robert A**	190	St. Louis
Wright, Robert W, III	125	Kansas City
Wright, William P	190	St. Louis
Wu, William Q	125	Prairie Village, KS
Wuellner, David H	178	Sedalia
Wulfers, Michael C	042	Cape Girardeau
Wulff, George J	190	Miami, FL
Wurm, Michael J	158	Maryville
Wurr, Dieter H	190	Arnold
Wurster, Jerry B	125	Leawood, KS
Wurster, Mark W	125	Kansas City
Wurster, W. J.	125	Kansas City
Wyatt, Jonathan A	195	St. Louis
Wyrsch, Leo M	082	Springfield

Y

Yahnke, David G	138	Farmington
Yang, H. Kell	026	Columbia
Yang, John S	174	Ste. Genevieve
Yanover, Robert A	190	St. Charles
Yanow, Mitchell	190	St. Louis
Yap, Mardonio J	190	Florissant
Yarwood, Robert L	189	Lake St. Louis
Yasin, Fazle M	190	St. Louis
Yates, Charles L	026	Columbia
Yates, John M	058	Jefferson City
Yates, Karen	042	Cape Girardeau
Yates, William D	190	St. Louis
Yazdi, Tom M	190	St. Louis
Yeast, John D	125	Kansas City
Yedlin, Jay H	125	Kansas City
Ylagan, Amando, Jr.	190	St. Louis
***Yocum, Russell S**	125	Platte City
Yoesel, Michael A	126	Kansas City
Yoo, Chong-Sup	106	Festus
Yoon, Jin S	078	Chillicothe
Yoon, Kong-Woo	190	St. Louis
Yoselevsky, Robert	190	St. Louis
Yost, John G, Jr.	125	Kansas City
Youmans, David C	195	Manchester
Youmans, Ronald A	125	Prairie Village, KS
Young, Alexander H	195	St. Louis
Young, Calvin C	102	Joplin
Young, Eric E	125	Kansas City
***Young, Michael A**	058	Jefferson City
Young, Patricia A	050	N. Kansas City
Young, Paul H	190	St. Louis
Young, Robert A	190	Chesterfield

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*Doctor of Osteopathy

Young, Robert B Rolla	135
Young, Thomas J St. Joseph	030
Young, Vernon L St. Louis	190
Youngblood, James P Kansas City	125
Younger, Anita C Sarasota, FL	190
Younger, Ernest Sarasota, FL	190
Yoxall, Kelly E Lee's Summit	126
Yu, Mario K Kansas City	125
Yu, Simon M St. Louis	190
Yuen, Benjamin H Cape Girardeau	042

Z

Zacharias, Kulangara P Columbia	026
Zacharias, Sara Columbia	026
Zahn, Robert L Springfield	082
Zamah, Nezaam M Kansas City	125
Zanol, John M Columbia	026
Zanol, Karen E Columbia	026
Zarr, James S Kansas City	125
Zehnder, Kenneth W St. Louis	190
Zeigler, Joseph M St. Louis	190
Zekert, Horst St. Louis	190
Zerr, Charles H Independence	125
Ziegler, Robert E St. Louis	190
Ziemianski, Matthew C Kansas City	125
Zimmerman, Devin D South Bend, IN	190
Zimmerman, Herbert B St. Louis	190
Zimmerman, Joe A Kennett	070
Zinn, Marcia V Lake Quivira, KS	125
***Zipper, Ronald** N. Kansas City	050
Zitsch, Robert P, III Columbia	026
Zivnuska, Frederick R St. Louis	190
Zoller, David D Blue Springs	125
Zukaitis, Mark G Kansas City	125
Zukowski, Edward T Chesterfield	190
Zurowski, Susan M Columbia	026
Zylka, J. Michael St. Louis	190

Primary Specialty Codes

A	Allergy	**OBG**	Obstetrics & Gynecology
AI	Allergy & Immunology	**OM**	Occupational Medicine
AN	Anesthesiology	**ON**	Medical Oncology
CD	Cardiovascular Disease	**OPH**	Ophthalmology
CDS	Cardiovascular Surgery	**ORS**	Orthopedic Surgery
CHN	Child Neurology	**OS**	Other Specialty
CHP	Child & Adolescent Psychiatry	**OTO**	Otolaryngology
CRS	Colon & Rectal Surgery	**PTH**	Pathology
CCM	Critical Care Medicine	**ATP**	Pathology, Anatomic
D	Dermatology	**CLP**	Pathology, Clinical
DR	Diagnostic Radiology	**PD**	Pediatrics
EM	Emergency Medicine	**PDA**	Pediatric Allergy
END	Endocrinology	**PDC**	Pediatric Cardiology
FPS	Facial Plastic Surgery	**PDN**	Pediatric Neurology
FP	Family Practice	**PDP**	Pediatric Pulmonary
GE	Gastroenterology	**PDR**	Pediatric Radiology
GP	General Practice	**PDS**	Pediatric Surgery
GPM	General Preventive Medicine	**PM**	Physical Medicine & Rehabilitation
GS	General Surgery		
GYN	Gynecology	**PS**	Plastic Surgery
HEM	Hematology	**P**	Psychiatry
HNS	Head & Neck Surgery	**PH**	Public Health
ID	Infectious Diseases	**PUD**	Pulmonary Disease
IM	Internal Medicine	**RO**	Radiation Oncology
MFM	Maternal & Fetal Medicine	**TR**	Radiation Therapy
NPM	Neonatal-Perinatal Medicine	**R**	Radiology
NEP	Nephrology	**REN**	Reproductive Endocrinology
N	Neurology	**RHU**	Rheumatology
NS	Neurological Surgery	**TS**	Thoracic Surgery
NSP	Neurology, Pediatric Surgery	**U**	Urology
NM	Nuclear Medicine	**VS**	Vascular Surgery
NR	Nuclear Radiology		

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Membership Roster by Primary Specialties

Allergy (A)

Caldwell, Joseph L	082	Springfield
Critchlow, Michael E	042	Cape Girardeau
Kahn, Marvin	125	Kansas City
Loren, Michael L	125	Independence
Maxson, Theodore R	110	Warrensburg
Miles, Wayne B	082	Springfield
Nguyen, Helen T	030	St. Joseph
Olive, George C	166	Neosho
*Sacha, Robert F	042	Cape Girardeau
Sportsman, Weldon L	050	Kansas City
Stricker, William E	135	Rolla
Thiel, J. Allen	190	St. Louis
Vandewalker, Mark L	026	Columbia

Allergy & Immunology (AI)

Berson, Douglas R	002	Chesterfield
Bolinske, Robert E	190	St. Louis
Chapman, Jean A	042	Cape Girardeau
Dankner, Arnold	190	Chesterfield
Dankner, Rand E	190	Chesterfield
Korenblat, Phillip E	190	St. Louis
Onder, Robert F	190	St. Louis
Straub, David L	102	Joplin
Tillinghast, Jeffrey P	190	St. Louis

Anesthesiology (AN)

Abada, Rolando	190	St. Louis
Adams, Riley R	042	Cape Girardeau
Almuttar, Wasif F	158	Maryville
Arnold, Donald E	190	St. Louis
Axness, Mark E	082	Springfield
Ayata, Sedat M	190	St. Louis
Azzam, Farid J	190	St. Louis
Bagby, Jack M, Jr.	082	Springfield
Bailiff, Robert	082	Springfield
Bashyakarla, Rajeeva K	102	Joplin
Batan-Co, Ruby L	190	Chesterfield
Baudendistel, Lawrence J	190	St. Louis
Behbahani, Parviz M	190	Bridgeton
Bell, Stephen	190	St. Louis
Bernard, Lisa	125	Kansas City
Bessonny, Eric J	190	St. Louis
Binda, Robert E	125	Kansas City
Bluestone, Kenneth I	125	Leawood, KS
Blum, Carol A	002	Excelsior Spgs.
Blum, Philip C	125	Kansas City
Bode, Eugene T	125	Kansas City
Borup, Jerrell L	082	Springfield
Bowenschulte, Bradley A	082	Springfield
Bowers, Gregory R	202	Matthews
Bowser, Robert L	050	Independence
Bredemann, Jeffrey A	125	Parkville
Brian, William J	082	Springfield
Brigden, Robert B	102	Neosho
Brown, Freeman F, III	190	Ballwin
Brown, Michael S	026	Columbia
Brown, Norbert W	125	Kansas City
Bruns, Kenneth	190	St. Louis
Bult, Mark J	082	Springfield
Butterfield, Mari Ann	125	Lee's Summit
Casement, Brian A	125	Kansas City
Chang, Chil K	026	Columbia
Charapata, Steven G	125	Kansas City
*Ciliberti, John A	050	Kansas City
Cobb, Milton L	190	St. Louis
Cohen, Harry B	014	Mexico
Cohn, Steven G	125	Kansas City
Cole, Donald E	066	Springfield
Coleman, Kevin A	190	St. Louis
Comens, Ruth C	190	St Louis
Cook, James R	082	Springfield
*Corzine, John J	030	St. Joseph
Couper, Nicholas B	026	Columbia
Criscione, James S	190	St. Louis
Cunningham, Milamari A	026	Columbia
Custer, Robert M	190	Fenton
Daily, James M	082	Springfield
Danner, Shavonne L	125	Kansas City
*Davis, Larry E	050	N. Kansas City
DeBoard, James W	190	St. Louis
*Delaney, Adrain J, Jr.	125	Kansas City
*DeLucia, Joseph A	206	West Plains
Doerhoff, Adelia L	058	Jefferson City
Dolan, Patrick H	190	St. Louis
Duerksen, Joseph J	125	Kansas City
Dunteman, Edwin D	190	Ballwin
Eaton, Frank M	002	St. Louis
Edelman, Kent J	102	Joplin
Eggers, George W, Jr.	026	Columbia
Ellis, Ronald L	082	Springfield
Ellis, Stephen C	125	Independence
Esther, John W	082	Springfield
Evenson, Curtis C	082	Springfield
Faszholz, Mark S	190	St. Louis
Ferrari, Herbert A	190	St. Louis
Fibuch, Eugene E	125	Kansas City
*Fisher, Robert B	026	Columbia
Flores, Jhonson E	190	St. Louis
Foote, Daniel D	082	Springfield
Forand, Joseph M	190	St. Louis
Fotopoulos, Constantine L	002	Overland Park, KS
*Frederick, Mark R	058	Jefferson City
Friedman, Michael J	026	Columbia
Friedrich, Anthony P	190	St. Charles
Friend, T. Gregory	125	Kansas City
Fromme, Glenn A	082	Springfield
Fryer, Dorothy S	190	St. Louis
Gholkar, Vijay R	125	Kansas City
Gibbons, James J	190	St. Louis
Gibbons, Robert T, Jr.	125	Overland Park, KS
Gibson, William P	190	Chesterfield
Gilliland, Craig	002	Kansas City
Glenski, James A	125	Kansas City
Gordon, Bruce J	026	Columbia
*Greer, Sam T	102	Joplin
Griffin, Donald R	002	Kansas City
Guernsey, Kendra J	002	Lawson
Gupta, Nilakshi	026	Columbia
Gurba, Carol L	125	Kansas City
Guy, Cynthia S	190	St. Louis
Hagen, Douglas W	125	Kansas City
Hari, Magaral S	102	Joplin
Hata, Tara M	026	Columbia
Hauptmann, Edward J	002	St. Louis
Herdoiza, Alfonso W	125	Shawnee Mission, KS
Hervey, William H	125	Kansas City
Hinds, R. David	026	Columbia
Hoech, George P, Jr.	125	Kansas City
Holloway, Robert B	190	St. Louis
Holtmann, Barbel	190	St. Louis
Hubbard, John D	125	Kansas City
Hudson, Randall B	125	Kansas City
Huff, Kalaichelvi R	102	Joplin
Hull, Timothy A	125	Kansas City
Iwane, Akira	190	Chesterfield
Jaax, Jeffrey D	125	Kansas City
Janeczko, Gregory F	082	Springfield
Jenkins, James J	190	St Louis
Johnson, Garry A	190	Des Peres
Jones, Gale O	125	Kansas City
Jones, Robin R	026	Columbia

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*Doctor of Osteopathy

ANESTHESIOLOGY

Jorgensen, Eric D	Columbia	026
Joshi, Surekha K	St. Louis	190
Joyce, Jeffrey T	Kansas City	125
Kappesser, Roland C	St Louis	190
Keller, Barbara P	Columbia	026
Kelly, James B	Kansas City	125
Kelly, Joseph G	N. Kansas City	050
Kenney, John D, III	Overland Park, KS	125
*Kesseler, Randall G	Springfield	082
Khoury, Cecile S	Leawood, KS	125
Kim, William W	St. Louis	190
King, James A	St. Louis	002
Kiyanclar, M. Emin	St. Louis	190
Krechel, Susan W	Columbia	026
Krug, Paul E	Kansas City	125
Kulkarni, Nandini S	St. Louis	190
Kussman, Mary E	St. Louis	002
Lampert, Benjamin A	Springfield	082
Landrum, Alice L	Columbia	026
Laposky, Lynda L	Chesterfield	190
Laughlin, Thomas P	Kansas City	125
Lawson, Noel W	Columbia	026
Lee, Leander K	St. Louis	190
Leicht, Craig H	St. Louis	002
Lerner, Bruce	Independence	125
Lobdell, Creig M	Springfield	082
*Logston, David G	Springfield	082
Lonergan, James H	Kansas City	125
Ludwikosky, Mikel A	Lee's Summit	125
Lytle, Michael F	Shawnee Mission, KS	125
Macler, Henry H, Jr.	Augusta	190
Maddipati, Sreedevi	St. Louis	190
Mallow, James E	Kansas City	125
Matson, Jeffrey A	Kansas City	125
Matthews, J. Mark	Kansas City	125
Mayer, Lawrence M	Cape Girardeau	042
Mayuga, Edgardo G	St. Louis	190
McCord, E. Scott	Columbia	026
McCray, Stephen A	N. Kansas City	050
McDonald, Michael G	Joplin	102
McIntosh, Donald E	Kansas City	125
McNitt, Jay D	Kansas City	125
Mestad, Peter H	Kansas City	125
Meyer, D. Joseph, Jr.	Columbia	026
*Michael, Roy A	Jefferson City	058
Miller, Robert N	St. Louis	190
Moore, Richard E	Cape Girardeau	042
Morgan, Richard L	Kansas City	125
*Morley, Ronald F	Jefferson City	058
Morrison, Robert R	Kansas City	125
Muehlebach, Victoria	Kansas City	125
Murray, Alison H	St. Louis	190
Muzaffaruddin, Mohammed	St. Louis	189
Nelson, Richard E	Kansas City	125
Nielsen, Carl H	St. Louis	190
Nordhues, Craig A	Springfield	082
Nye, Robert A	St. Louis	190
Oakley, Margaret M	St Louis	190
Opper, Susan E	Kansas City	125
Orr, Robert M	Kansas City	125
Owens, William D	St. Louis	190
Parker, Craig A	Kansas City	125
Parker, Kim E	Kansas City	125
Parks, Jon C	Poplar Bluff	034
Patel, Bipin T	St. Joseph	030
Pavelonis, Joel D	Kansas City	002
Perryman, Kathy M	Kansas City	125
Petersen, Larry D	Springfield	082
Piontek, James F	Liberty	050
Politi, Gregory B	Kansas City	125
Porter, Michael J	Kansas City	125
Porter, Susan S	Kansas City	125
Potts, Fred E, III	Springfield	082
Powers, Catherine A	Leawood, KS	125
Presutto-Nelson, Kathleen A	Springfield	082
Pryor, Ira Jo	Joplin	102
Rao, Vijaya Kuma P	Joplin	102
*Ray, Terry L	Columbia	026
Reaney, John A	Leawood, KS	125
Reddy, Beena M	Wichita, KS	190
*Rhoads, Mark D	Joplin	102
*Ripperger, Kevin L	Springfield	082
Roa, Necita L	St. Louis	002
Rodrigo, Bernardo R	St. Louis	190
Rofail, Amin A	Shawnee Mission, KS	125
Romkema, George E	St. Louis	190
Roth, Alfred D	Mission, KS	125
Rumpf, Ronald P	Columbia	026
*Russell, Robert B	Cape Girardeau	042
Schane, Catherine L	Springfield	082
Schneider, J. Michael	Springfield	082
Schneider, Sally L	Chesterfield	190
Schranck, Charles R, Sr.	St. Louis	190
Schuessler, Edward C	St. Albans	190
Schweiss, John F	St. Louis	190
Shah, Narendra	St. Joseph	030
Shaw, David A	Rolla	135
Shelley, William C	Kansas City	125
*Shipman, Wade M	Springfield	082
Shopper, Glenn K	Kansas City	125
Sims, William A, Jr.	St. Louis	002
Slimack, Joseph P	Chesterfield	002
Smith, Brian D	Chesterfield	002
*Smith, Gregory H	Glencoe	002
*Smith, Toni R	Kirksville	148
Smith, Victorija L	Hazelwood	190
Southwick, Christopher L	Columbia	026
Spade, Diana J	Springfield	082
Stark, William H	Kansas City	125
Stewart, Angela R	Columbia	026
Stiles, Michella M	Kansas City	125
Stoops, Stephen L	Kansas City	125
Stromberg, Eric D	Kansas City	125
*Suthoff, Jim	Joplin	102
Sutton, Trevor S	St. Louis	002
*Tanner, Scott W	Jefferson City	058
Tate, Kara L	Kansas City	125
Tatini, Paparao	St. Louis	190
*Tewis, Huey D	Cape Girardeau	042
Thomas, James J	Kansas City	125
Thompson, David E	Independence	125
Tiojanco, Milagros E	Kansas City	125
Tomlinson, David L	Kansas City	125
Towle, Daniel J	Kansas City	125
Triantafillou, Anastasios	St. Louis	190
Tuohy, Gerald F	Kansas City	125
Turner, Marc A	Leawood, KS	125
Vallurupalli, Vijayalakshmi	Bridgeton	190
Venneman, Charles R	Kansas City	125
*Vialle, Gene M	Kansas City	125
Vinjamuri, Madhav B	St. Louis	002
Vogel, Arthur P	Shawnee Mission, KS	125
Waddle, Jean P	St. Louis	190
Walker, Andrew	Hannibal	150
Waring, J. Michael	Kansas City	125
Watson, Tom F	Springfield	082
*Weaver, Bruce E	Columbia	026
Weaver, Mark E	Springfield	082
*Webb, James J	Joplin	102
Wempe, Michael J	St. Joseph	030
Westcott, Bruce R	Cape Girardeau	042
Wilhite, Tria K	Shelbyville	150
Wilkinson, Linda	Kansas City	125
*Wright, Michael D	St. Joseph	030
Wright, Robert W, III	Kansas City	125
Yates, Charles L	Columbia	026
Yedlin, Jay H	Kansas City	125
Young, Patricia A	N. Kansas City	050
Zinn, Marcia V	Lake Quivira, KS	125
Zukaitis, Mark G	Kansas City	125

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Cardiovascular Disease (CD)

Ahuja, Suraj P	125	Kansas City
Akin, C. David	125	Independence
Apprill, Phillip G	190	St. Louis
Ashley, Lillard G, Jr.	125	Kansas City
Bai, Samuel S	106	Festus
Banerjee, Dilip	074	Washington
Barr, W. Kent	125	N. Kansas City
Best, John F	082	Springfield
Biel, Stanley I	190	Bridgeton
Billadello, Joseph J	002	St. Louis
Bloom, Stephen A	125	Kansas City
Bogart, Douglas B	125	N. Kansas City
Bowman. W. Kirk	042	Cape Girardeau
Bresnahan, Dennis R	125	Kansas City
Callicoat, Paul E, Jr.	102	Joplin
Chapman, James B	042	Cape Girardeau
Chu, Paul R	125	Independence
Chun, Duck S	190	St. Louis
Cochran, David S	082	Springfield
Conn, Robert D	125	Kansas City
Cooksey, Jon D	190	St. Louis
Cooper, C. Wesley	082	Springfield
Corcoran, Francis H	102	Joplin
***Cox, John M**	102	Joplin
Cupp, Gerald V	026	Columbia
Davis, J. Lawrence	190	St. Louis
Deane, Louis V, Jr.	190	St. Louis
Dwyer, James G	190	St. Louis
Earnest, James B	125	Kansas City
Fagan, Leonard F, Jr.	190	St. Louis
Farrar, Michael W	125	Shawnee Mission, KS
Freeman, James A	026	Columbia
Freiman, Paul C	082	Springfield
Gafford, Franklin H, IV	190	St. Louis
George, Achenklinju K	206	West Plains
Gibson, Paul H	190	St. Louis
Glueck, Robert M	125	Kansas City
Godlewski, Krystof J	125	Kansas City
Good, Thomas H	125	Kansas City
Gowda, Siddhesh	190	Chesterfield
Hamilton, William P	190	St. Louis
Harshman, David M	190	St. Louis
Hartzler, Geoffrey O	125	Shawnee Mission, KS
Haycraft, Gordon L	042	Cape Girardeau
Hedge, S. Roy	125	Kansas City
Henry, Clarke L, Jr.	125	N. Kansas City
Herman, Robert L	125	Kansas City
Hess, John P	190	St. Louis
Hills, Joe E	082	Springfield
Hindupur, Mohan R	030	St. Joseph
Huber, Kenneth C	125	Kansas City
Hubert, John W	190	Bridgeton
Jackson, Jay A	125	Kansas City
Jain, Savitri G	190	St. Louis
Johnson, Randy G	190	St. Louis
Johnson, Warren L, Jr.	125	Kansas City
Kennett, Jerry D	026	Columbia
Kilgore, John W	190	St. Louis
Kindred, Lynn H	125	Kansas City
Kistler, W. David, Jr.	190	St. Louis
Kroetz, Frank W	202	Sikeston
LaFoe, William K	042	Cape Girardeau
Laughlin, Edward J	125	Independence
Lawrence, Willie E, Jr.	125	Kansas City
Lee, Gerald B	214	Kansas City
Lee, Jung H	106	Crystal City
Levi, Bernard	125	Kansas City
Long, John W	026	Columbia
Love, Gerry A	125	Liberty
McCallister, Ben D	125	Kansas City
McConahay, David R	125	Kansas City
Meyer, Randall E	058	Jefferson City
Miller, John T	125	N. Kansas City
Mizell, Myron W	082	Springfield
Montgomery, Michael A	125	N. Kansas City
Moore, Thomas B	102	Joplin
Mukharji, Jhulan	125	Kansas City
Musick, William D	026	Jefferson City
Myears, Donald W	082	Springfield
Nordlicht, Scott M	190	St. Louis
Oliver, G. Charles	002	St. Louis
Ostrow, Louis B	042	Cape Girardeau
Penilla, Antonio R	190	St. Louis
Politte, Lenard L	026	Columbia
Porter, Charles B	125	Kansas City
Riner, Ronald N	190	St. Louis
Roselman, Michael J	082	Springfield
Rutherford, Barry D	125	Kansas City
Ruwitch, Joseph F, Jr.	190	St Louis
Sanders, Jack S	058	Jefferson City
Scharf, Daniel	125	Kansas City
***Schlegel, William L**	058	Jefferson City
Shafer, Kenneth E	206	West Plains
Shimshak, Thomas M	125	Kansas City
Spadaro, James J	190	St. Louis
Spitler, Allen L	042	Cape Girardeau
Spurny, Otto M	125	Kansas City
Stahl, Lloyd D	125	Kansas City
Stauffer, Robert C	102	Joplin
Steinhaus, David M	125	Kansas City
Stickley, Louis P	190	St Louis
Sweeney, Michael J	125	Kansas City
Talbert, Clifford R	042	Cape Girardeau
Van Osdo, Kelvin D	082	Springfield
Weiss, Alan N	190	St Louis
Whiting, Richard B	190	St. Louis
Wolff, Dolores P	190	St. Louis

Cardiovascular Surgery (CDS)

Bailey, Colin E	026	Columbia
Bryant, Lester R	026	Columbia
Crouch, John A	026	Columbia
Curtis, Jack J	026	Columbia
Demmy, Todd L	026	Columbia
Ewy, Marvin F	026	Columbia
Foley, Jonathon K	042	Cape Girardeau
Freund, William L	125	N. Kansas City
Johnson, Fritz M	082	Springfield
Lammoglia, Francisco J	030	St. Joseph
Mangalat, Narayanan K	102	Joplin
McCroskey, Brian L	125	Kansas City
McManama, Gerald P	190	St. Louis
Morrison, Stephen K	082	Springfield
Pinckley, James N	082	Springfield
Retter, Kenneth W	042	Cape Girardeau
Rogers, James D	082	Springfield
Ruff, Paul G	082	Springfield
Schmaltz, Richard A	026	Columbia
See, W. Mike	026	Columbia
Stamatis, John J	082	Springfield
Starr, Steven K	125	N. Kansas City
Valuck, Richard P, Jr.	150	Hannibal
Voelker, Donald J	026	Columbia
Walls, Joseph T	026	Columbia

Child Neurology (CHN)

Dodge, Philip R	190	St Louis
Mantovani, John F	190	St. Louis
Prensky, Arthur L	190	St Louis

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*Doctor of Osteopathy

Child Psychiatry (CHP)

Alfie, Salomon	Shawnee Mission, KS	125
Birchansky, Bonnie-Lee	St. Joseph	030
Buchanan, Barbara N	Kansas City	125
Churchill, Stephen W	Kansas City	125
Daniel, A. E.	Columbia	026
Edwards, James E	St. Louis	190
Huk, Stephen G	Kansas City	050
Inniss, Rosalyn E	Kansas City	125
Moore, Harry G, Jr.	St. Louis	190
Quiason, Emmeline P	Independence	125
Stanley, John H	Kansas City	125
Sumer, Emel A	Bridgeton	190

Colon & Rectal Surgery (CRS)

***Abbadessa, Steven M**	St. Louis	190
Arends, Todd W	Chesterfield	190
Brabbee, Gregory W	St. Louis	190
Fleshman, James W	St. Louis	190
Gose, Don F	Springfield	082
Graham, Bruce D	Shawnee Mission, KS	125
Kodner, Ira J	St Louis	190
Kossoy, Kent I	St. Louis	002
Robbins, Philip L	St. Louis	190

Critical Care Medicine (CCM)

Hata, J. Steven	Columbia	026

Dermatology (D)

Ailor, Susan K	Columbia	026
Albert, I. Renee	St. Louis	190
Anderson, Daphne W	Springfield	082
Anderson, Frank K	St. Charles	189
Anderson, Philip C	Columbia	026
Aronberg, Jerome M	St Louis	190
Ashby, Jennifer D	N. Kansas City	125
Bailey, Hugh R	Kansas City	002
Bauschard, Frederick D	St. Louis	190
Burkhart, Edward F	Delray Beach, FL	190
Chanasue, John A	Florissant	190
Creech, Fred T	Columbia	026
Dempsey, Kenneth J	Sikeston	202
DeSpain, John D	Kansas City	125
Dilworth, Jacquelyn B	St. Louis	190
Dyer, Gary A	St. Joseph	030
Eisen, Arthur Z	St. Louis	190
Foote, Jerry E	Columbia	026
Forsman, Karen E	St. Louis	190
Gentry, Michael A	Springfield	082
Griffin, Darrell L	Farmington	138
Gunn, Victoria	Jefferson City	058
Gunnoe, Robert E	Kansas City	125
Hall, John C	Kansas City	125
Higgins, Ronald A	Kansas City	125
Hilton, Paul E	Joplin	102
Hironimus, John E	St. Louis	190
Hruza, George J	St. Louis	190
Hruza, Luciann L	St. Louis	002
Johnson, Dallas A	Overland Park, KS	125
Lane, Daniel K	St. Louis	190
Levenson, Ina	Poplar Bluff	034
Lynch, Thomas W	Springfield	082
Major, Troy E	Springfield	082
Marrs, David B	St. Charles	189
Matlock, Mark S	Joplin	102
McCadden, Michael E	St. Louis	190
McCloud, Deborah J	Joplin	102
Medler, P. Louis	St Louis	190
Melia, B. J., Jr.	Kansas City	125
Miller, Charles W	St. Louis	190
Morrow, N. Eugene	Springfield	082
Oleson, Gale B	Blue Springs	125
Palmer, Stephen M	St. Louis	190
Payne, David E	Columbia	026
Portnoff, Lee S	St. Louis	190
Powell, John A	St. Louis	190
Reese, Lester T	St. Louis	190
Ring, Lisa B	Bridgeton	190
Roller, James A	Columbia	026
***Schwarze, Robert F**	Florissant	190
Scott, Jamie A	Springfield	082
Shatley, Miriam J	Jefferson City	058
Simmons, Jess S	Joplin	102
Stoecker, William V	Rolla	135
Stuart, Wallace	Crestwood	190
Swinfard, Ronald W	Columbia	026
Thomas, F. Anthony	Kansas City	050
Tiefenbrunn, Sharon F	St. Louis	190
Tucker, Dolores R	Chesterfield	190
Uhlemann, John H	St. Charles	189
Vitale, Stephen J	Ballwin	190
Walsh, Richard J	St. Joseph	030
Werth, Joseph A	Jefferson City	058
Wolfe, Edward M	St Louis	190
Zanol, Karen E	Columbia	026
Ziegler, Robert E	St. Louis	190
Zurowski, Susan M	Columbia	026

Diagnostic Radiology (DR)

Amini, Jafar	Shawnee Mission, KS	125
Anthony, James P	Kansas City	125
Applewhite, Thomas A	St. Louis	190
Balfe, Dennis M	St. Louis	190
Bartlett, John E	Springfield	082
Barton, Premsri T	St. Louis	190
Beal, Catherine E	St. Louis	190
Belshe, Sidney B	Jefferson City	058
Bocchini, Thomas P	St. Louis	002
Brent, Lanny R	Springfield	082
Brown, Mike J	Cape Girardeau	042
Carlton, Lynn N	Springfield	082
Churchill, Robert J	Columbia	026
Claycomb, Gerald K	Chesterfield	190
Cooper, Barry R	N. Kansas City	050
Crabtree, Jay B	Bolivar	066
Cram, John W	Springfield	082
Crepps, Louis F	St. Louis	190
Cronemeyer, Richard L	Lee's Summit	125
Cubillo, Enrique	St. Louis	190
Cusumano, Joseph V	St. Louis	190
Cyriac, George K	Mexico	014
Davis, Gene L	St Louis	190
Davis, W. Bob	Mission, KS	002
Dell, Robert V	Hannibal	150
Dever, Robert L	Joplin	102
Devkota, Jagadishwar	Columbia	026
Dierberg, Dale F	Chesterfield	074
Engels, John T	St. Louis	002
Ernst, Edwin C, III	St. Louis	190
Evens, Ronald G	St Louis	190
Fisher, James K	Kansas City	125
Fletcher, Dale M	St. Louis	002
Foss, Jonathan M	St. Louis	190
Francis, Roger A	Linn Creek	120
Garvin, Charles F	St. Louis	190
Gehm, Louis E	Butler	214
Geisse, Guillermo	St. Louis	190
Gennaoui, Jad M	St. Louis	190
Gibson, Merlyn D	Columbia	026
Glazer, Harvey S	St. Louis	190
Goodhope, Karen F	St. Louis	190
Graviss, E. Richard	St. Louis	190
Greditzer, Harry G	St. Louis	190
Gresick, Robert J, Jr.	St. Louis	190
Gusnard, Debra A	St. Louis	190

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*Doctor of Osteopathy

Hammerman, Albert M	190	St. Louis
Hardy, Jeffery A	190	St. Louis
Hartman, Rodney C	178	Sedalia
Hazuka, David F	125	Shawnee Mission, KS
Hillard, Alan E	026	Columbia
Hinson, Gary W	125	Overland Park, KS
Hoffman, Mark J	190	St. Louis
Holtz, Sumner	002	Chesterfield
Idstrom, Mark E	125	Kansas City
Jones, Maynard C, Jr.	125	Lee's Summit
Jones, Paul S	102	Joplin
Junker, James A	106	St. Louis
Keller, Stephen M	190	St. Louis
Kelling, E. Collyer	082	Springfield
Koontz, Kenneth L	125	Kansas City
Krahn, Michael J	050	Kansas City
Kuckelman, Richard G	125	Kansas City
Lee, H. T.	026	Columbia
Lepkowski, Hemlata K	026	Columbia
Levine, Richard S	190	St. Louis
Levitt, Robert G	190	St. Louis
Looney, Steven C	030	St. Joseph
Martin, David S	190	Chesterfield
Mayes, Ben R	190	St. Louis
McClennan, Bruce L	190	St. Louis
McManus, Gerald	050	N. Kansas City
Merkle, John A	190	St. Louis
Moore, Michael T	214	Nevada
Morgan, John L	082	Springfield
Mosher, Amy A	002	St. Louis
Mullenger, Keith L	190	Belleville, IL
Nelson, David E	082	Springfield
Olson, Robert J	082	Springfield
Omell, Gary H	190	St. Louis
O'Toole, Patrick M	125	Kansas City
Pohl, David L	190	St. Louis
Pottenger, L. Kennett	102	Joplin
Price, Hilton I	190	St. Louis
***Radinsky, Stephen**	190	St. Louis
Rose, John F	078	Rochester, MN
Rosenthal, Debra D	190	St. Louis
Sadhu, Vijay K	026	Columbia
Sanders, Harold L	026	Columbia
Sauer, James M	082	Springfield
Scearce, Robert L	058	Jefferson City
Scheible, Robert F	190	St Louis
Schmidt, Maria E	190	St. Louis
Schwegler, Robert G	125	Shawnee Mission, KS
Seelig, Robert D	002	St. Louis
Shaplin, Alfred D	106	Ballwin
Smid, Anne A	082	Springfield
Smith, Emily L	190	St Louis
Sobky, George H	190	Louisiana
Soha, Joseph J, Jr.	026	Columbia
Stevens, Edward M	030	St. Joseph
Stewart, James G	190	St. Louis
Stoecker, Willeford J	042	Cape Girardeau
Sullivan, Dan T	082	Springfield
Sullivan, David M	082	Springfield
Sullivan, John A	082	Springfield
Swaney, Charles M	026	Columbia
Sweeney, Thomas P	082	Springfield
Szoko, Edward	190	St. Louis
Thalblum, Harvey	125	Kansas City
Thomasson, Jeffrey L	190	St. Louis
Tobler, Jerry	190	St. Louis
Totty, William G	190	St. Louis
Trotta, Philip C	190	St. Louis
Vannier, Michael W	190	St. Louis
Waddell, Thomas H	125	Kansas City
Weis, Ronald R	125	Kansas City
Wiele, Kimberly N	190	St. Louis
Wilcox, Dennis M	125	Leawood, KS
Wilson, J. Mark	082	Springfield
Wolski, James R	082	Springfield

Emergency Medicine (EM)

Adkins, Charlene	026	Columbia
Ammala, Edward D	135	Rolla
Bell, Malinda H	125	Shawnee Mission, KS
Berry, Danny T	042	Cape Girardeau
Blackburn, Michael D	026	Columbia
Blaine, James R	082	Springfield
Bonney, Samuel C	074	Washington
Carter, Gary L	125	N. Kansas City
Criscione, James R, Jr.	190	St. Louis
DeCoursey, Kenneth A	042	Cape Girardeau
Dill, Laura L	125	Kansas City
Dunlap, Michael D	030	St. Joseph
DuMontier, Alan J	190	Chesterfield
Gambill, Gary L	190	Chesterfield
Grisham, Thomas D	074	Washington
Hassen, Mark A	002	St. Louis
Hicks, Robb R, IV	042	Cape Girardeau
Hierholzer, Rebecca S	125	N. Kansas City
Holbrook, C. R., III	125	Kansas City
Judge, Steven J	074	Washington
Julien, Rene	190	Centreville, IL
***Karr, Jerry L**	042	Cape Girardeau
Keesal, Dennis	189	St. Charles
Kensel, Robert S	082	Springfield
Kolda, Michael A	042	Cape Girardeau
Labayen, Ricardo A	125	Overland Park, KS
***Landers, Gary A**	050	N. Kansas City
Lewis, Lawrence M	190	St. Louis
Lorei, John M	002	Parkville
Maranan, Diosdado L	106	Arnold
McIntosh, Douglas A	042	Cape Girardeau
McMurry, Ted A	082	Springfield
Mobley, Gilbert L	082	Springfield
Moranville, Benedict A	030	St. Joseph
Morgan, Edward B	190	St. Louis
Nelson, Michael J	125	Lee's Summit
Newport, Mark D	082	Springfield
Pancoast, Charles H	042	Cape Girardeau
Parks, William C	026	Columbia
Patel, Raman J	030	St. Joseph
Poggemeier, David A	189	St. Charles
Prickett, David C, Jr.	050	Kearney
Psaltis, Phillip E	030	Kansas City
***Ramsey, Jesse R**	042	Cape Girardeau
Ratcliff, Keith M	074	Washington
***Roberts, Rebecca L**	030	Kansas City
Rush, Marvin R	174	Ste. Genevieve
Russell, Steven L	050	Kansas City
Scarborough, Betty F	125	Shawnee Mission, KS
Selove, Peter T	102	Joplin
Skeins, Edward J, Jr.	082	Springfield
Smith, Earl E, III	190	Bridgeton
Steele, Mark T	002	Kansas City
Stoliar, Bruce	190	St. Louis
Sullivan, Christine	125	Overland Park, KS
Svancarek, William P	190	St. Louis
Szewczyk, Michael J	026	Columbia
***Tedrick, Phillip D**	042	Cape Girardeau
***Turner, Timothy T**	002	Barrington, IL
Velander, Robert D	125	Kansas City
Waeckerle, Joseph F	125	Leawood, KS
Weaver, Michael L	125	Kansas City
Weber-Bornstein, Nancy	042	Cape Girardeau

Endocrinology (END)

Duda, Ralph J, Jr.	082	Springfield
Duick, Daniel S	042	Cape Girardeau
Fowler, Wayne L, Jr.	125	Kansas City
Hamburg, Mitchell S	125	Kansas City
Hellman, Richard	125	N. Kansas City
Henson, Bruce E	125	Kansas City

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*Doctor of Osteopathy

James, Ronald C Columbia	026
Kryshak, Edward J Springfield	082
Porte, Karen L Joplin	102
Rosen, Howard M N. Kansas City	125
Sweet, Robert A Springfield	082

Facial Plastic Surgery (FPS)

Buchwach, Kenneth A Independence	125
deLeeuw, Karel A Springfield	082
Jernstrom, Vance R Kansas City	125
LaFerriere, Keith A Springfield	082
Prstojevich, Steven J St. Louis	190
Simo, Frank St. Louis	190
Tanner, John P Fairway, KS	125
Thomas, J. Regan St. Louis	190

Family Practice (FP)

Abu Dal, Ziad St. Louis	190
***Adkison, Brian W** Seymour	082
Ahnemann, Janet L Clinton	086
Allan, James E Jefferson City	058
Allcorn, Donald K Lincoln	178
Alonso, J. Mario, Jr. St. Louis	190
Anglo, Luis B St. Louis	190
Asaro, Phillip V St. Louis	190
Asbury, Dale W Jackson	042
***Asher, Kennett D** Jackson	042
Askew, John H Sikeston	202
Auner, J. David Ironton	138
Baker, Carl N St. Louis	190
Baker, Donald L Union	074
Barbe, David O Mountain Grove	206
Batty, Thomas V Eldorado Spngs	214
Belden, Jeffery L Columbia	026
Bennett, John E Jefferson City	058
Berner, Carol T Springfield	082
Bernhardt, Gary D Lenexa, KS	125
***Betz, William T** Grandview	125
***Bieser, R. Dan** Cape Girardeau	042
Binz, Donald E St. Peters	189
Bird, Jonathon M Farmington	138
Boatright, Kevin Farmington	138
***Bohn, Sara A** California	058
Bowles, Richard P Liberty	050
Boydston, Catherine O Odessa	118
Boydston, Wyatt W Odessa	118
Bradley, J. Douglas St. Joseph	030
Bradshaw, William D Kansas City	125
Brockhaus, Jayne R Warrensburg	110
Brookreson, Alton D Poplar Bluff	034
Brown, Merlin D St. Joseph	030
Brunworth, David Washington	074
Buffaloe, Robert N Jefferson City	058
Buie, Steven E Kansas City	125
Burcham, Tom R Farmington	042
***Bynum, Robert L** Ashland	026
Byrum, Fritz A Ballwin	190
Cady, Roger K Springfield	082
Caldwell, Fred Poplar Bluff	034
Campbell, Albert J Sedalia	178
Carder, Steven A Liberty	002
Carey, Larry J Springfield	082
Carney, Stephen E Sikeston	202
Carr, George W Jefferson City	058
Carranza, Mauro J St. Louis	190
Carter, James E, Jr. Kansas City	125
Caster, Philip W Lebanon	115
Catron, David O Cape Girardeau	042
Chaffin, Jerald D Branson	208
Chambon, Gregory E Kansas City	125
Chastain, Charles W Flat River	138
Chavez, Salvador St. Louis	190
Collison, R. Michael Springfield	082
Colter, Kim D Washington	074
Colwill, Jack M Columbia	026
Comfort, George D Mexico	014
Covert, Richard A St. Louis	190
Craig, Jonetta M St. Louis	002
Cravens, David D Centralia	026
Cravens, William P Fulton	038
Crespo, Horacio T Warrenton	074
Crespo, Remedios R Warrenton	074
Crist, Roderic C Cape Girardeau	042
Dang, Robert C Pleasant Hill	214
Darlow, Lloyd Chesterfield	190
Dausmann, Gary W Poplar Bluff	034
Davis, Carl S Lee's Summit	125
Dean, Walter E Maryville	158
***Dekker, Anthony H** Kansas City	125
DeLine, Jim Macon	046
Dempsey, Herbert A Lee's Summit	125
***Dempsey, Herbert E** Lee's Summit	125
***Depew, Deborah A** Sullivan	074
***Detten, William R** Springfield	082
Devabhaktuni, Rama Dev Ballwin	190
Dickerson, Malcolm J Eldon	058
Dierker, Harry D Columbia	026
Dimayuga, Nestor G Mansfield	206
Dixon, Druery J West Plains	206
Dodson, Jack M Jefferson City	058
Domke, Henry F New Bloomfield	058
Donnell, Harold E De Soto	106
Donnell, William S, Jr. Bolivar	066
Dorsch, Stephen E Independence	125
Dougherty, Thomas M, Jr. Plattsburg	054
Downey, Jon P Cape Girardeau	042
Dunshee, Robert E Maryville	158
Dyer, Curtis W Warrensburg	110
Ekern, H. Peter Mexico	014
Elcock, Devera M Ballwin	190
***Eldenburg, Steven C** Sedalia	178
Elfrink, Melanie Ede Marshall	198
Elliott, Wendell H Poplar Bluff	034
Fakhoury, Donald A Kansas City	050
Florence, Kerry E Washington	074
Fowler, Marvin L West Plains	206
Frazier, Robert L Sikeston	202
Gailey, Raymond K Joplin	102
Gilbirds, William M, II Kansas City	050
Glover, David Warrensburg	110
Godar, Sharon A Chesterfield	190
Goff, John E Joplin	102
Good, Michael W Springfield	082
***Graves, Karladine E** Kansas City	050
Grechus, John J Farmington	138
Green, William R St Louis	190
Greenlund, Nelson C Nevada	214
Griffith, S. Kent Cape Girardeau	042
Groce, George D Fulton	038
Hall, David W Springfield	082
Hall, Terry E Bethany	078
Halverson, Larry W Springfield	082
Hamid, Rashid S Marshall	198
***Hancock, Thomas J** Jefferson City	058
Hardy, Stanton L Desloge	138
***Hare, Thomas** Springfield	082
Harr, Patrick B Maryville	158
Harris, Louis B Bolivar	066
Hayden, Melvin R Camdenton	120
Hayes, Lawrence L Kansas City	050
Hayes, Nancy J Mountain Grove	206
Hecker, Jos E Poplar Bluff	034
Hedrick, Frances A Holts Summit	058
Hernandez, J. Humberto Gerald	074
Herrmann, Deborah A Marshall	198
Heutel, Lee B St Louis	190
Hite, Dennis E Lebanon	115
Hoffmann, Alan L Kansas City	125
Hofmeister, Roger W Columbia	026

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*Doctor of Osteopathy

*Hoke, Brent K	110	Warrensburg
Holley, Donald B	082	Springfield
Holzem, Craig S	074	Washington
*Honderick, Richard T	082	Springfield
Hopkins, Thomas A	082	Springfield
Howell, David T	002	Florissant
Hrabik, Brent	158	Tarkio
Hubbard, Sally L	082	Springfield
Huffman, Larry	208	Branson West
Humphrey, James D	158	Mound City
Hunter, James K, Jr.	158	Fairfax
Huss, Randall D	135	Rolla
Icaza, Ramiro	042	Jackson
Inocentes, Fe A	189	O'Fallon
*Isaacs, Victor E	042	Scott City
Jackson, Max G	125	Kansas City
Jenkins, Edward R	135	Waynesville
Johnson, Joseph E	125	Kansas City
Johnson, Lent C	150	Hannibal
Johnson, Patrick E	138	Farmington
Jones, Gordon	202	Sikeston
Kairuz, Bartolome C	190	St. Louis
Kanne, Marty A	050	Kansas City
Kapp, Dave	174	Perryville
Kappesser, Netajean G	190	St. Louis
Kasten, Mark C	042	Cape Girardeau
Kenney, Douglas R	086	Clinton
Kessler, William D, Jr.	102	Joplin
Kimlinger, William R	058	Jefferson City
Kinder, Doyle O	082	Springfield
Klein, Kendel L	166	Mount Vernon
Koon, Benny H	066	Bolivar
Kruse, Carl R	150	Palmyra
Laatsch, Robert H	034	Poplar Bluff
Laiben, Gregg R	125	Kansas City
Lauber, Joseph J	190	St Louis
Lavery, Daniel P	058	Westphalia
Lee, Susan L	125	Kansas City
Legler, Larry E	125	Independence
Leroux, Gene H	034	Doniphan
*Lewis, Randall W	002	High Ridge
Lisbon, Eleanor A	125	Kansas City
Lischwe, Daniel H	190	Bridgeton
Loeb, Mark	026	Columbia
Lofgreen, Craig S	002	Kansas City
Long, Timothy P	074	Marthasville
Lueckenhoff, Rebecca R	058	Jefferson City
Luerding, Jeffrey A	050	Kansas City
Lukavsky, James P	208	Branson
Lutkewitte, Jos F	174	Ste. Genevieve
Lyle, Robert R	120	Versailles
Madden, Michael L	125	Kansas City
Marcellus, Peter R	208	Branson
Markway, Gregory A	125	Independence
Marshall, William G	026	Glasgow
Martin, Mark W	125	Lee's Summit
Martin, Robert A	206	West Plains
Mason, Mary Jan	135	Steelville
Masters, Edwin J	042	Cape Girardeau
McCullough, Timothy L	002	Chesterfield
McFarland, Rodney J	166	Neosho
McQue, Ellen L	150	Hannibal
Mehaffy, Orville A	102	Joplin
Mehr, David R	026	Columbia
Meier, Francis X	058	Jefferson City
*Melchior, David E	174	Perryville
Memken, John A	150	Hannibal
Menchetti, Donald E	082	Springfield
Meyer, Jerry L	118	Concordia
Miller, William D	030	St. Joseph
Miravite, Jaime V	002	Chesterfield
Montes, Arturo C	190	Florissant
Morgan, W. Tom, Jr.	026	Columbia
Morton, Wayne L	214	Osceola
Mueller, Randall E	026	Columbia
Munger, Michael L	125	Kansas City
Myers, Carl M	125	Platte City
*Neely, James W	078	Gallatin
Newbold, Steven E	125	Monett
Newman-Koehn, Mica K	198	Marshall
O'Connor, John J	074	St. Louis
Ojascastro, Alejandro C	190	St. Louis
O'Keefe, Timothy	102	Joplin
*Onik, Jan F	150	Louisiana
O'Rourke, James E	174	Ste. Genevieve
Ortiguero, Leopoldo M	190	St. Louis
Osbourn, Richard A	038	Fulton
Ostergaard, Daniel J	125	Kansas City
Ottinger, Christopher M	125	Independence
Ouellette, David F	150	Hannibal
Owen, John D	125	Liberty
Palen, James E	042	Cape Girardeau
Papreck, K. T.	198	Marshall
Paris, William H	190	Bridgeton
Patel, Natu B	078	Bethany
Patterson, Donald R	102	Joplin
*Pearson, Garry D	058	Tipton
Pennington, Michael S	166	Springfield
Philgreen, Donald E	125	Kansas City
Phillips, Kenneth D	042	Cape Girardeau
Phillips, Ronald L	148	Kirksville
Piker, K. Dewayne	082	Springfield
Pimentel, Esperanza M	190	St. Louis
Pinkham, Chris M	050	Kansas City
Pitney, Phillip W	150	Louisiana
Poggemeier, William H	189	St. Charles
Pon, Marcelino	190	St. Louis
Porter, Walter N, Jr.	125	Lenexa, KS
Potts, Donald A	125	Kansas City
Presley, Jimmy C	082	Springfield
Preston, Bruce E	206	West Plains
Prica, George, Jr.	026	Columbia
Price, Richard C	214	Harrisonville
Radel, Steven M	189	St. Peters
Randolph, Bernard C	190	St. Louis
Rapp, Earl L	150	Hannibal
*Reed, Leea D	082	Springfield
Reeder, Charles C	050	Smithville
*Reno, Lisa K	018	Lamar
Reyes, Efraim	082	Springfield
Reyes, Luis A	190	Arnold
Reynolds, Susan K	190	St. Louis
Rhee, Seoung E	190	St. Louis
Richardson, George A	074	Union
Robbins, Thomas D	058	Jefferson City
Roberts, Theodore W	202	Sikeston
Robertson, William D	034	Poplar Bluff
Rogers, H. Bryan	190	St. Louis
Rosen, William K	082	Springfield
Royce, Debra L	102	Sarcoxie
Rues, Lawrence A	125	Kansas City
Rumpf, Michelle R	125	Kansas City
Ryan, David	078	Trenton
Salanski, Stephen C	125	Lee's Summit
Santner, Floyd A	078	Marceline
Scharrer, Alan J	002	Lee's Summit
Schmitz, Ralph A	166	Monett
Schroff, Carle E	082	Springfield
Schutz, John P	050	Excelsior Spgs.
Scott, E. David	058	Jefferson City
Scott, Kenneth F	086	Clinton
Seale, Stuart A	082	Springfield
Shaw, James T	074	Hermann
Shaw, Robert D	206	Willow Springs
Shields, Lawrence S	082	Springfield
Shinn, Michael E	050	Kansas City
*Shoop, Jill E	082	Springfield
*Sill, William	189	St. Peters
Silvers, L. Michael	125	Kansas City
Sincox, Charles H	074	Washington
Sitzmann, Bryan L	050	Kansas City
Slaughter, Larry	026	Columbia

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*Doctor of Osteopathy

Smith, Claude F Willow Springs	206
Smith, Gilbert D Poplar Bluff	034
Snow, Arthur D, Jr. Shawnee Mission, KS	125
Sparkman, Thomas C Cape Girardeau	042
Spence, Paul A Cape Girardeau	042
Spencer, Donald C Fulton	026
Spurlock, Luther D Rolla	135
Spurney, Joe E Kansas City	125
Staten, Stephen F St. Louis	190
Steele, Jack T Bridgeton	190
Steenbergen, Michael Jefferson City	058
Steiner, Marvin P Independence	125
Stelmach, Walter J Kansas City	125
Stone, Kenneth D Sikeston	202
Stringer, Kenton L Aurora	166
Stuerman, Lawrence G Louisiana	150
Suarez, Alberto Lee's Summit	125
Tegtmeyer, Chris Lebanon	115
Theby, Janet E Eldon	058
Thies, Jerome H Osceola	214
Thomas, Deborah G Cape Girardeau	042
Thompson, Frederick L Nevada	214
Thompson, Scott W Kansas City	125
Till, Bennie N Poplar Bluff	034
***Tipton, Richard J** Cape Girardeau	042
Tobin, Marla J Higginsville	118
Treadwell, Randall E Chesterfield	190
Tuohy, Mary Ka Overland Park, KS	125
Turner, James D Washington	074
Turner, Kirby L Poplar Bluff	034
Uketui, Ozoemenam I St. Joseph	030
***Upton, Gary L** Columbia	026
Van Bure, Wilbur D Kansas City	002
Van Zante, Niko A Osceola	214
Vargas, Theodoro C Pacific	190
Vigneron, Eugene A Jefferson City	058
Walton, J. Douglas Sikeston	202
Ward, Mark Joplin	102
Waterman, Franklin M Overland Park, KS	050
Watts, Samuel M Mt. Vernon	166
Weiss, James J Jefferson City	058
Welsh, Jon A Perryville	174
***Wescott, Thomas P** Holden	110
Weston, Kenneth G Columbia	026
Wheeler, Robert L Harrisonville	214
White, David S Lake Ozark	120
White, Russell D Aurora	166
Williams, Paul A St. Louis	002
Williamson, Blake J Overland Park, KS	125
Williamson, Paul S Kansas City	002
Wilson, David E Smithville	050
Wilson, Timothy A Kansas City	050
***Wilson, W. Timothy** Springfield	082
Wirths, Kimberly M Springfield	082
Workman, George M Hermann	074
***Wright, James C** Perryville	174
Wulfers, Michael C Cape Girardeau	042
Wurm, Michael J Maryville	158
Wurr, Dieter H Arnold	190
***Yocum, Russell S** Platte City	125
Young, Robert B Rolla	135
Zanol, John M Columbia	026

Gastroenterology (GE)

Allen, Mark J Kansas City	125
Brand, Stanley N Kansas City	125
Brock, Arthur L Independence	125
Clement, Donald J Kansas City	125
Coleman, Matthew J Cape Girardeau	042
Cooper, Gary D Liberty	050
Culver, Perry J, Jr. Kansas City	125
Cusworth, Robert St. Charles	189
***Deffenbaugh, Larry D** Joplin	102
Edwards, Dean A Cape Girardeau	042
Farrell, John S Bridgeton	190
Fedotin, Michael S Kansas City	125
Frederickson, Neil W St. Louis	190
Freeman, Michael R Cape Girardeau	042
Geisman, Richard A St. Peters	189
Gerhardt, Donald C Columbia	026
Ginsberg, B. William Kansas City	125
Gordon, Glenn L Mexico	014
Gurian, Lawrence E Springfield	082
Helzberg, John H Kansas City	125
Honaas, Trygve O Cape Girardeau	042
Hover, Alexander R Springfield	082
Jacobs, Walter H Kansas City	125
Jennett, Richard B Jefferson City	058
Kipfer, Robert E Springfield	082
Kouo, Louis Cape Girardeau	042
Landers, Burnell Independence	125
Lee, Wilfred Cape Girardeau	042
Libel, Roy D Springfield	082
Marshall, Jay P, II Chesterfield	190
McCullough, Joseph E Kansas City	125
McPhee, Mark S Kansas City	125
Mentgen, Carl N Springfield	082
Mohrman, Raymond F Bridgeton	190
Pelican, George St. Louis	190
Petersen, James H Chesterfield	002
***Schneider, Horace L** Cape Girardeau	042
Shell, William C Sikeston	202
Shuler, Frederick N Kansas City	125
Stein, Bernard Joplin	102
Taormina, Marc K Independence	125
Wooten, Michael B Springfield	082

General Practice (GP)

Akremi, Janet E Warrensburg	110
Allan, James R Columbia	026
Anderson, Paul B Neosho	166
***Andrews, Lynthia B** Kansas City	030
***Bader, Larry W** Columbia	026
Baldwin, Theodore R Excelsior Spgs.	118
Baumann, Albert R Steelville	135
Bradley, William W Centralia	026
Butler, Susan M Jefferson City	058
Campbell, James E Macon	046
Campbell, James W Advance	202
Carleton, Charles E Farmington	138
Carlin, Albert L Stanberry	158
Carpenter, Wallace Rock Port	158
Choudhury, M. Hasan Houston	206
Conant, James F St. Joseph	030
***Courter, Gary M** Lebanon	115
Dettmer, Robert F Ironton	138
Dudik, Randall G Rolla	135
Eldenburg, Donald O Sedalia	178
Frein, Donald E Harrisonville	214
Frissell, Dan H, Jr. St. Genevieve	174
Gavini, Rajendra R St. Louis	190
***Gayle, David R** Piedmont	034
***Gayle, Richard E** Piedmont	034
Grable, James D Cape Girardeau	042
Gunn, Jack Versailles	120
Haynie, William W Butler	214
Heath, Jimmy D East Prairie	202
Hettinger, Brenda A Camdenton	120
Howell, Billy D Brookfield	078
***Irinyi, Elmer T** Gower	030
Jahanian, Iraj Springfield	082
Karraker, Alvan G Farmington	138
Kauffman, Ruth Versailles	120
Knipschild, Bedford F Marshall	198
Ladd, Charles B St. Louis	190
Lankford, Harold D Mexico	014
Lichty, Charles A Shelbina	150
***Lillig, James F** Kansas City	050
Long, Curtis W Butler	214

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*Doctor of Osteopathy

Magaw, David C Everton	**066**
Magruder, Lyell M Nevada	**214**
McFadden, Gene A Waverly	**118**
Menne, Marvin C Ironton	**138**
Millwee, Elizabeth M Centralia	**026**
Moore, Michael R West Plains	**206**
Morehead, William E Malden	**070**
Morris, John J Columbia	**026**
Morrison, Thomas A Aurora	**166**
Ozenberger, Larry A Plattsburg	**054**
Painter, Andrew E Portageville	**202**
Pavlu, Robert R Waverly	**118**
Pehlman, Jos E Malden	**070**
***Pewitt, Charles S** Jackson	**042**
Raynor, Richard C Marshall	**198**
Reed, Glen H Appleton City	**214**
Rul-Lan, Carlos D Kansas City	**002**
Sargent, Alden P Sikeston	**202**
Schaaf, Robert O St. Joseph	**030**
Scowley, John E Richmond	**118**
Shanahan, Philip J Florissant	**190**
Singh, Daljeet R Higginsville	**118**
Smith, Robert W Brookfield	**078**
Smith, William J Windsor	**086**
Tanner, Christina E Springfield	**082**
Taylor, Steve J Mexico	**014**
Villarama, Antonio P High Ridge	**190**
Vinyard, Jack L Joplin	**102**
Wall, Joe A Houston	**206**
Won, Russell St. Louis	**190**

General Preventive Medicine (GPM)

Engelberg, Alan L St. Louis	**190**
Michelson, Richard B Kansas City	**125**

General Surgery (GS)

Abella, Ben Zuluet Belton	**125**
Aeder, Mark I Kansas City	**125**
Afuwape, Emanuel A E. St Louis	**190**
Albano, Benjamin I Crystal City	**106**
Allen, Brent T St. Louis	**190**
Almiron, Osias A House Springs	**190**
Altepeter, H. Martin St. Louis	**190**
Ancheta, Apolinario A Springfield	**082**
Anderson, Charles B St. Louis	**190**
Andres, Edward H St. Joseph	**030**
Andrus, Charles H St. Louis	**190**
Apostol, Andres G Monett	**166**
Arbab, Ali A Kansas City	**125**
Arenos, Proceso T St. Louis	**190**
Arnold, Kenneth J Chesterfield	**190**
Ashley, Michael E Springfield	**082**
Ashley, Thomas E Springfield	**082**
Ayvazian, Vatche H St. Louis	**190**
Babka, Joseph J St. Louis	**190**
Barr, Glenn A Kansas City	**125**
Barragan, Hector D St. Louis	**190**
Bartlett, Hugh C Rolla	**135**
Bass, Barry J Rolla	**135**
Bautista, Joel O Moberly	**046**
Bautista, Rogelio L Moberly	**046**
Beckman, Robert F St. Louis	**002**
Beggs, Charles W Liberty	**050**
Beheler, Edward M St. Joseph	**030**
Behrends, Steven H Kansas City	**125**
Behrens, Donald T St Louis	**190**
Benage, Clarence M St. Louis	**190**
Bennett, Kenneth J St. Louis	**190**
Bentlage, Charles H Joplin	**102**
Bergmann, Daniel J St. Peters	**189**
Berwald, David M Bridgeton	**190**
Betz, Robert F Neosho	**166**
Bhattacharya, Arjun St Louis	**190**
Billy, Lawrence J St. Louis	**190**
Binnington, H. B. St Louis	**190**
Birnbaum, Elisa H St. Louis	**190**
Bizek, J. L. Aurora	**166**
Blank, Michael K De Soto	**106**
Blanke, Thomas J St. Louis	**190**
Blumenthal, Mark F St. Louis	**190**
Branch, Walter D, Jr. Kansas City	**125**
Braverman, Stuart J Sedalia	**178**
Breeding, Lyle G Columbia	**026**
Brunt, L. Michael St. Louis	**190**
Buckner, John W Springfield	**082**
Buettner, John Brigha Chesterfield	**190**
Bukstein, Michael J Hannibal	**150**
Bumberry, John R Springfield	**082**
Bussmann, Carl E Bridgeton	**190**
Cabrera, Tomas V St. Peters	**189**
Cardwell, Daniel R Bolivar	**066**
Carter, James R Neosho	**166**
Cassat, James D Washington	**074**
Castaneda, Marco A Bridgeton	**190**
Catanzaro, Rudolph E St. Louis	**190**
Cheuk, Shu-Sum Chesterfield	**190**
Christiansen, Stephen D Springfield	**082**
Christy, John P Poplar Bluff	**034**
Chu, Peter Y Kansas City	**125**
Chung, Kap Eu Fredericktown	**138**
Chung, T. David Poplar Bluff	**034**
Codd, John E Bridgeton	**190**
Cohen, Marvin C Kansas City	**125**
Cooper, James F Bridgeton	**190**
Corrado, Joseph A Mexico	**014**
Corry, Francis M Springfield	**082**
Coscia, Robert L Springfield	**082**
Cotner, Mark S Joplin	**102**
Craighead, Michael L Jefferson City	**058**
Crighton, John C Springfield	**082**
Crisp, N. Denney Independence	**002**
Critchlow, J. Thomas Cape Girardeau	**042**
Daake, John W, Jr. St. Louis	**190**
Dandridge, Walter C Joplin	**102**
Denk, Alan F St. Louis	**190**
Dillard, Burl M St. Louis	**190**
Doerhoff, Alan R Jefferson City	**058**
Doerhoff, Carl R Jefferson City	**058**
Donovan, John F St Louis	**190**
Duff, William M Rolla	**135**
Dunn, Charles W Springfield	**082**
Egan, Robert C St. Louis	**190**
Elfrink, Roy J Marshall	**198**
Esparrago, F. R. Monett	**166**
Evans, Joseph M Hannibal	**150**
Evans, Joseph C, Jr. Independence	**125**
Fabito, Daniel C St. Louis	**190**
Fahrner, Mari A Chesterfield	**190**
Fallon, Richard H St. Louis	**190**
Floro, Kenneth E, Jr. St. Louis	**190**
Floro, Mariano N Florissant	**190**
Foreman, Phillip B Hannibal	**150**
Fraser, Daniel M St Louis	**190**
Frohman, Boris Sikeston	**202**
Gerowin, Lance St. Louis	**190**
Gibson, James D Springfield	**082**
Gieselmann, James W Poplar Bluff	**034**
Glenn, Edward A Louisiana	**150**
Gomez, Cesar A St Louis	**190**
Gosek, Marek J Warrensburg	**110**
Greene, Howard G Louisiana	**150**
Guerra, Gaston G Kansas City	**125**
Hahn, Bruce H Lee's Summit	**125**
Hamre, Daniel W Springfield	**082**
Hanna, Hugh A Warrensburg	**110**
Hansbrough, Eugene T Poplar Bluff	**034**
Harms, James F Nevada	**214**
Harris, Hugh S, Jr. Columbia	**026**

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*Doctor of Osteopathy

GENERAL SURGERY

Hayek, Michael E	St. Louis	**190**
H'Doubler, Charles	Mt. Vernon	**082**
H'Doubler, Francis T	Springfield	**082**
H'Doubler, Peter B	Springfield	**082**
Heeb, Max A	Sikeston	**202**
Helfrich, Loring	Sikeston	**202**
Hendren, Thomas H	Liberty	**050**
Hill, Ronald T	Dexter	**202**
Hirsch, John D	St. Louis	**002**
Hoberock, Thomas R	Branson	**208**
Hoehn, John P, III	St. Louis	**190**
Hornbostel, Phillip M	Sedalia	**178**
Howard, Todd K	St. Louis	**190**
Humphrey, Paul W	Columbia	**026**
Hunt, Robert S	Cape Girardeau	**042**
Ivins, Gregory K	Fulton	**038**
James, Kathleen M	St. Charles	**189**
Jefferis, Kenneth R	Maryville	**158**
Jensen, Joshua E, II	St. Louis	**190**
Johnson, Frank E	St. Louis	**190**
Joyce, Rex M	Kansas City	**125**
Kakaiya, Dilip H	Kennett	**070**
Kang, Young M	West Plains	**206**
Kanlic, Enes M	Creve Coeur	**002**
Kasten, Melvin C	Cape Girardeau	**042**
Kim, Tae S	Crystal City	**106**
Kinder, Jerry L	Cape Girardeau	**042**
King, Frank K	Hayti	**170**
Kingsbury, Robert J	St. Peters	**189**
Knight, James W	St. Louis	**190**
Koivunen, Debra G	Columbia	**026**
Koontz, Paul G	Kansas City	**125**
Krajcovic, David P	Chesterfield	**190**
Krause, G. Lynn, Jr.	Chesterfield	**190**
Kraybill, William G	St. Louis	**190**
Larson, Kenneth W	Springfield	**082**
LaHue, William C	Lexington	**118**
Laster, Jerry L	Joplin	**102**
Lerwick, Everett R	St Louis	**190**
Levy, Jerome F	St Louis	**190**
Liang, Jing C	Independence	**125**
***Light, Diane L**	Jefferson City	**058**
Limpiphiphatn, Dhajphong	Perryville	**174**
Londe, Alan M	St. Louis	**190**
London, Stanley L	St. Louis	**190**
Long, W. Steven	St. Joseph	**030**
Lopez-Plata, Roberto	Shawnee Mission, KS	**125**
Lowell, Jeffrey A	St. Louis	**190**
Ludwig, Mark A	St. Louis	**190**
Lugo, Samuel	St Louis	**190**
Lundman, Hugh	Springfield	**082**
Madrid, Dominador O	St. Louis	**190**
Mantese, Vito A	St. Louis	**190**
Marr, Garrett L	Kansas City	**125**
Martin, Clarence A	Joplin	**102**
Mayuga, Laureano G	Cabool	**206**
McCanse, Andrew	Kansas City	**125**
McCroskey, Lon C	Kansas City	**125**
McGinty, Frank H	Cape Girardeau	**042**
Meier, Mitchell S	Joplin	**102**
Meiners, David J	St. Louis	**190**
Metzler, Michael H	Columbia	**026**
Meyer, Robert C	St. Louis	**190**
Meyer, Wayne W	Bridgeton	**190**
Meyers, Jerry R	St. Peters	**189**
Miedema, Brent W	Columbia	**026**
Mitchell, Franklin L	Columbia	**026**
Moffe, Thomas C	Springfield	**082**
Monafo, William W	St. Louis	**190**
Morehouse, Paul D	Washington	**074**
Mosley, Julian C	St Louis	**190**
Mrosak, Daniel R	Lexington	**118**
Muhm, H. Yale	St. Charles	**189**
Mulder, George D	St. Joseph	**030**
Mutchnick, Norman	Kansas City	**125**
Nathan, Lester J	Fenton	**190**
Near, David M	Florissant	**190**
Newman, Joseph A	Joplin	**102**
Niesen, Frank J	St Louis	**190**
Niesen, Thomas E	Chesterfield	**190**
Nigro, Thomas L	Kansas City	**125**
Nwaobasi, Sam	Florissant	**190**
Occeno, Victor G	Cassville	**166**
Ochoa, Pedro	Valmeyer, IL	**190**
O'Farrell, Thomas P	Kansas City	**125**
Olive, G. Chapman	Springfield	**082**
Oliver, George A	Farmington	**138**
Olson, Richard O	St. Charles	**189**
Ong, Eng L	St. Louis	**190**
Parikh, Sharad P	Florissant	**190**
Parks, Charles	St. Louis	**190**
Parulekar, Dilip G	Fulton	**038**
Peick, Ann C	Poplar Bluff	**034**
Pennell, Richard C	St. Louis	**190**
Perez, Adamor R	St. Louis	**190**
Peters, Walter R	Columbia	**026**
Petit, Carl A	Osage Beach	**120**
Philpott, Gordon W	St Louis	**190**
Pitsinger, N. Bruce	Chesterfield	**190**
***Pitt, James B**	Osage Beach	**120**
Pontillas, Job B	Perryville	**174**
Previti, Vincent	Springfield	**082**
Radford, Diane M	St. Louis	**190**
Rao, Ricardo	St. Louis	**190**
Reardon, Thomas M	Kansas City	**050**
Reese, Jon A	Springfield	**082**
Reister, Philip D	Kansas City	**125**
Rendleman, George F, Jr.	St. Louis	**190**
Richards, Frank O	St. Louis	**190**
Richardson, Donna T	Union	**074**
Richardson, Norbert L	Union	**074**
Richmond, Ron	Cape Girardeau	**042**
Ridenhour, C. E. Gene	Columbia	**026**
Riechers, Thomas B	Washington	**074**
Roberts, Jonathan M	Jefferson City	**058**
Rodefeld, Mark D	St. Louis	**190**
Rodes, Ned D	Mexico	**014**
Rodriguez, Gregorio L	Charleston	**202**
Rodriguez, Ubaldo R	St. Louis	**190**
Roh, Joseph J	Kansas City	**125**
Rosenbloom, Michael	St. Louis	**190**
***Rotton, C. Bruce**	Springfield	**082**
Rubin, Brian G	St. Louis	**190**
Runez, Manuel W	Maryville	**158**
Safley, Thomas J	Independence	**125**
Sauer, Donald C	St. Louis	**190**
Schaefer, Glennon S	St. Louis	**190**
Schlarman, David E	St. Louis	**190**
Schneider, Thomas A	St. Charles	**189**
Schokker, Johannes	Jefferson City	**058**
Schuh, Marlys E	Creve Coeur	**190**
Scott, Joni C	Springfield	**082**
Sharlow, Joseph W	Ste. Genevieve	**174**
Shenoy, Surendra	Olivette	**002**
Shieber, William	St. Louis	**190**
Shine, Thomas E	St. Louis	**190**
Shook, John W	Shawnee Mission, KS	**125**
Shoults, Nicholas F	Springfield	**082**
Sicard, Gregorio A	St. Louis	**190**
Spadone, Donald P	Columbia	**026**
Spray, Thomas L	Philadelphia, PA	**190**
Standiford, Steven B	Columbia	**026**
Steiling, Sylvia A	St. Louis	**190**
Stoy, Robert P	Columbia	**026**
Strasberg, Steven M	St. Louis	**190**
Stubbs, Thomas R	West Plains	**206**
Sugarbaker, Stephen P	Jefferson City	**058**
Switzner, Diane L	Springfield	**082**
Tang, Teodoro	Salem	**135**
Tenorio, Arturo A	Stanberry	**158**
Terry, Boyd E	Columbia	**026**
Terschluse, David A	Bridgeton	**190**

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*Doctor of Osteopathy

Thiele, Otto K	**189**	St. Charles
Thornton, Fred H	**202**	Sikeston
Torres, Paul	**050**	Kansas City
Trinidad, Hermanito R	**078**	Chillicothe
Troop, Bryan R	**190**	St. Louis
Tucker, George L	**190**	Chesterfield
Turner, William A	**214**	Nevada
Underwood, Johnson, III	**050**	Kansas City
Vadlamani, S. M.	**190**	St Louis
Vardeleon, Roger V	**190**	St. Louis
Verzola, Eufemio G	**106**	Herculaneum
Vidals, Victor G	**125**	Kansas City
Villahermosa, Juanito L	**010**	Savannah
Vitale, Thomas J, Jr.	**190**	St. Louis
Wade, Scott A	**030**	St. Joseph
Wadley, John J	**178**	Sedalia
Waldby, Gail E	**078**	Huron, SD
Waldschmidt, Mike L	**125**	Liberty
Waltz, James R	**050**	Liberty
Webb, John M	**050**	Kansas City
Wells, Samuel A, Jr.	**190**	St. Louis
Werner, F. Scott	**050**	Kansas City
Westerman, Robert N	**190**	St Louis
Westfall, Scott G	**190**	Chesterfield
Westfall, Susan H	**190**	Chesterfield
Wetzel, C. Robert	**086**	Clinton
Wetzel, Gus S	**086**	Clinton
Wilbers, Raymond H	**014**	Mexico
Willcoxon, Robert L	**102**	Joplin
Windmiller, M. Eugene	**026**	Columbia
Wittmer, Marc R	**082**	Springfield
Wonder, Donald	**208**	Branson
Woods, John J, Jr.	**190**	St. Louis
Yap, Mardonio J	**190**	Florissant
Yates, William D	**190**	St. Louis
Ylagan, Amando, Jr.	**190**	St. Louis
Zacharias, Kulangara P	**026**	Columbia

Gynecology (GYN)

Alderman, Lillian C	**050**	Liberty
Ferneau, James E	**026**	Columbia
Fuchs, George J	**026**	Columbia
Jacob, Joe	**026**	Columbia
Patterson, Donald C	**026**	Columbia
Pingelton, William B	**026**	Columbia
Roberts, Howard H	**102**	Joplin
Watson, Trevor F	**026**	Columbia
Williams, Carol F	**190**	St. Louis

Hematology (HEM)

Abbey, Elliot E	**002**	St. Louis
Bayer, William L	**125**	Kansas City
Carden, Juan O	**190**	St. Louis
Chan, Celia L	**042**	Cape Girardeau
Davidner, Mark L	**125**	Kansas City
Geier, Larry J	**125**	Kansas City
Grant, Ruth	**082**	Springfield
Loftus, Loretta S	**125**	Kansas City
Minkoff, I. Monica	**189**	St. Peters
Monaghan, Greg G	**026**	Columbia
Muscato, Joseph J	**026**	Columbia
Muscato, Mary S	**026**	Columbia
Neubauer, Marcus A	**125**	Overland Park, KS
Peterson, Jay T	**125**	Kansas City
Pluard, Timothy J	**189**	St. Charles
Ratkin, Gary A	**190**	St. Louis
Vellek, Mark J	**026**	Columbia
Weigand, Robert T	**030**	St. Joseph
Woodson, Mark E	**190**	St. Louis

Head & Neck Surgery (HNS)

Seabaugh, Janice L	**014**	Mexico

Infectious Diseases (ID)

Brewer, Joseph H	**125**	Kansas City
Fried, John S	**125**	Overland Park, KS
Gerecht, Wolfe B	**082**	Springfield
Haddow, Alastair D	**082**	Springfield
Henry, R. Beth	**125**	Kansas City
Hinrichs, James H	**190**	Bridgeton
McKinsey, David S	**125**	Kansas City
Neihart, Robert E	**125**	Kansas City
Smith, David Lambut	**125**	Kansas City
Spernoga, John F	**190**	St. Louis
Winton, Mark D	**058**	Jefferson City

Internal Medicine (IM)

Abbott, David A	**190**	St. Louis
Abel, Charles C	**190**	St. Louis
Abinoja, Conrado B	**190**	St. Louis
Aguinaldo, Jaime A	**190**	St. Louis
Ahadi, Abd U	**190**	St Louis
Ahern, Archibald M	**190**	St. Louis
Ahmad, Naseer	**190**	St. Louis
Albano, Grace A	**125**	Independence
Alegre, Jorge M	**190**	Chesterfield
Allen, Thomas P	**125**	Overland Park, KS
Alonso-Yague, Pascual	**190**	Florissant
Alvarez, Ulises C	**190**	Florissant
Ammatelli, Francis J	**125**	Kansas City
Andrews, Paul E	**082**	Springfield
Anslinger, David L	**190**	Chesterfield
Assi, Nizar A	**190**	St. Louis
Auclair, Ronald J	**190**	St. Louis
Avioli, Louis V	**190**	St. Louis
Aydt, Sarah A	**042**	Cape Girardeau
Azan, Kenneth N	**178**	Sedalia
Back, Donald K	**082**	Springfield
Backstrom, Jay T	**125**	Kansas City
Baker, Tim E	**074**	Washington
Balakrishnan, Roja	**135**	Rolla
***Balcer, Conrad S**	**058**	Jefferson City
Banton, M. Roman	**190**	St. Louis
Barjenbruch, Peggy W	**014**	Mexico
Barlow, Val John	**190**	Chesterfield
Barnes, Larry G	**166**	Neosho
Barrow, Jack	**190**	St. Louis
Bartell, Michael F	**190**	St. Louis
Bateman, Timothy M	**125**	Kansas City
Bauer, Daniel J	**190**	St. Louis
Bauwens, Daniel B	**190**	Chesterfield
Beato, David L	**190**	St. Louis
Bender, Walter L	**125**	Kansas City
Benedict, William W	**190**	Chesterfield
Bentley, John D	**082**	Springfield
Berdy, Susan S	**190**	St. Louis
Berkowitz, Ellis R	**030**	St. Joseph
Bernabe, Ofelia M	**190**	St. Louis
Bernstein, Aaron M	**190**	St. Louis
Best, John A	**190**	Chesterfield
Bettonville, Peter V	**190**	St. Louis
Betz, Richard J	**166**	Neosho
Bhuyan, Mahendra	**190**	St. Louis
Bialecki, Leon	**190**	St. Louis
Biggs, Alfred D, Jr.	**125**	Kansas City
Birge, Clifford A	**190**	St. Louis
Bligh, Richard A	**002**	Ballwin
Blum, Donald A	**190**	St. Louis
Boldt, Thomas H	**190**	Bridgeton
Bolger, Michael J	**002**	St. Louis
Bonsanti, Robert L	**190**	Bridgeton
***Boone, Gina E**	**002**	Smithville
Boonshaft, Benje	**190**	St Louis
Borja, Egbert R	**082**	Springfield
Borowsky, Benjamin A	**190**	St. Louis
Borrego, Raul A	**138**	Farmington

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*Doctor of Osteopathy

INTERNAL MEDICINE

Boulware, Robert Chillicothe	078
Boulware, William T Chillicothe	078
Bowe, Christopher C St. Louis	190
Bowles, G. R. St. Louis	190
Bowlin, Steven K Kansas City	125
Bownik, Theodore B Kansas City	050
Boyer, Peter A Jefferson City	058
Braverman, Abe E Overland Park, KS	125
Bregant, Robert E Jefferson City	058
Breite, Warren M Festus	106
Brinkman, Robert A Chesterfield	190
Broaddus, Loren E Springfield	082
Brockman, M. Douglas Springfield	082
Brody, Arnold G St. Louis	190
Broun, Goronwy O, Jr. St. Louis	190
Brown, Barry D St. Louis	190
Brown, Frances Kansas City	125
Brukardt, Diane T Columbia	026
Bryant, T. J. Kansas City	125
Budd, John J, Jr. St. Louis	190
Burmeister, R. William St. Louis	190
Burns, Edward L St. Louis	190
Burns, Richard W Columbia	026
Burns, Thomas W Columbia	026
Butin, Richard E Kansas City	125
Butsch, Richard H St. Peters	190
Cabral, Galileu St. Louis	190
Caldwell, Fred M Poplar Bluff	034
Camp, Alan D Bridgeton	002
Campbell, J. William St. Louis	190
Carmody, John P St. Louis	190
Carothers, Karmel L Independence	125
Cary, John M Chesterfield	190
Cayabyab-Loe, Lilibeth P Mountain View, CA	190
Chandra, Mahesh Independence	125
Chandramohan, Nanjappa Carthage	102
Charles, Francois St Louis	190
Chase, Larry K Springfield	082
Chaudhuri, Tapan K Raytown	125
Chavez, Victor M Ballwin	190
Chern, Mou S Ava	206
Chernoff, Selbert G Lee's Summit	125
Chin, Mark Maw-Chan Chesterfield	190
Chinsky, Murray St. Louis	190
Choe, Mira L Oklahoma City, OK	190
Chouinard, Michael P Sikeston	202
Clark, David P Columbia	026
Clark, Lin W Blue Springs	125
Clark, Robert C St. Joseph	030
Cline, Daniel M Kansas City	050
Coates, James G St. Charles	002
Cochran, Thomas E Springfield	082
***Cohen, Donald L** Kansas City	125
Cohen, Hillard K St. Ann	190
Colbert, Dennis G St. Louis	190
Convery, Paul B St. Louis	190
Cooper, Barry J St. Louis	190
Copp, Ralph St. Louis	190
Coppinger, Thomas A Kansas City	125
Corder, James C St. Louis	190
Costigan, David J St. Louis	190
Coulter, Steven L Kansas City	125
Cramer, Quentin Kansas City	125
Crespin, Stephen R St Louis	190
Crie, J. Stanley St. Joseph	030
Crockett-Maples, Melinda Springfield	082
Cruz, Sergio G Monett	166
Cryer, Philip E St. Louis	190
Cuddihee, Robert E St. Louis	190
Cummings, Steven W Brentwood	190
Cunningham, Edwin J Chesterfield	190
Cunningham, Richard D Springfield	082
Curry, Michael J St. Charles	189
Custer, Galen M Kansas City	125
***Daly, Michael M** Columbia	026
Dames, Richard J Chesterfield	190
Daniels, John S St. Louis	002
Davis, Alexander C Overland Park, KS	125
Deardeuff, Dwight L Rolla	135
DeCastro, Edna C Kansas City, KS	002
Deckard, Shelby W Springfield	082
DeFeo, Frederick G Kansas City	125
Delcambre, Marie A Kansas City	125
Delwood, Don M Columbia	026
Dembinski, David R Kansas City	125
Dew, Thomas A Chesterfield	190
Dexter, J. Kent Springfield	082
Diedriech, Linda L St. Louis	190
Diemer, Thomas S Cape Girardeau	042
Diestelhorst, James A St. Louis	190
Dieterle, Brian D Branson	208
DiPasco, Donald J St. Louis	190
Dorton, Robert K St. Louis	190
Dorzab, Linda L Overland Park, KS	125
Dotson, Lori J Boonville	026
Drapcho, Connie S Joplin	102
Duff, James E Springfield	082
Duff, John A Springfield	082
DuMonteer, Gary Washington	074
Emerson, William A St Louis	190
Emons, Matthew F St. Louis	190
Enriquez, Roman S Kansas City	125
***Entrup, Mark H** Springfield	082
Ervin, John E Kansas City	125
Esguerra, Eden M Joplin	102
Esther, James H St. Louis	190
Ethirajan, Sukumar Kansas City	125
Evans, Andrew L Springfield	082
Farnham, Milo M Independence	125
Faron, Mark A Chesterfield	190
Farrell, Thomas M St. Louis	002
Favors, Adolphus C, Jr. St. Louis	190
Feldman, David St. Louis	190
Ferguson, John L Springfield	082
Ferrara, Robert P St. Louis	190
Figueroa, Eliseo O St. Louis	190
Fischer, Robert St. Louis	190
Fisher, Linda St. Louis	190
Fishman, Norman Chesterfield	190
Fitch, Coy D St. Louis	190
Fleming, David A Moberly	046
Fleming, J. Will, Jr. Moberly	046
Flicker, Michele R Kansas City	125
Flotte, Sylvester A St Louis	190
Flury, Kirk E St. Louis	190
Fogarty, William M, Jr. St. Louis	190
***Frank, Robert A** Independence	125
Fraser, Victoria J St. Louis	190
Frawley, Thomas F St. Louis	190
Frey, Jeffrey P Columbia	026
Fritz, William H St. Louis	190
Froehlich, Thomas W Springfield	082
Galant, Mark R Belton	125
Galbreath, Ashford M, Jr. Kansas City	125
Gale, Arthur H St. Louis	190
Galvez, Sisenando P Marceline	078
Garcia, Kathleen M St. Louis	190
Garfinkel, Bernard T St. Louis	190
Garriga, Francisco J Florissant	190
Gatchalian, Felicitas Z St. Louis	190
Gedney, William B Valley Park	190
Geier, David L Springfield	082
Gendel, Jonathan Lee's Summit	125
Gentsch, Kenneth W St. Louis	190
Gerbarg, Zachary B St. Louis	002
Ghosh, Nellie St. Louis	190
Gill, Paul J Springfield	082
Gillbanks, Marjon M Independence	125
Ginardi, Donald E Kansas City	125
Ginther, James W, Jr. St. Louis	190
Giorgi, Lee V Kansas City	125
Glazer, Melvin L Kansas City	125

---

*Doctor of Osteopathy

Godwin, Lehman W	Springfield	082
Goldman, Arnold M	St. Louis	190
Goldman, Barry C	Kansas City	125
Goodenberger, Daniel M	St. Louis	002
Goodwin, J. Wendall	Springfield	082
Gordon, Mark E	N. Kansas City	050
Gottlieb, Charlene C	St. Louis	190
Gould, Ronald J	St. Louis	190
Grady, Ronald K	Chesterfield	190
Grant, John M	St Louis	190
Grant, Neville	St Louis	190
Greenlaw, Cal W	Chillicothe	078
Gregory, Mark H	St. Louis	190
Griesbaum, Robert V	St. Louis	190
Grieshop, Theodore J	Cape Girardeau	042
Gruenebaum, Michael I	Lenexa, KS	125
Gutierrez, Anthony C	Kansas City	125
Gutierrez, Ernesto	Florissant	190
Guyol, William B, Jr.	St. Louis	190
Gwin, Edward	Springfield	082
Ha, Richard J	Hannibal	150
Haacke, Linda T	Frontenac	002
Haas, Harry D	Blue Springs	125
Hafer, Thomas E	Belton	125
Hagemann, Margarethe H	St. Louis	190
Hagen, Garrett A	St. Louis	190
Hale, Thomas H	Manchester	190
Halloran, Mark J	St. Louis	190
Halpin, Stephen E	Hannibal	150
Halsted, Robert W	Washington	074
Halsted, Teresa M	Washington	074
Hamburg, Eric D	Farmington	138
Hammerman, Marc R	St. Louis	190
***Handlin, Larry R**	Mexico	014
Hardy, Patrick J	Florissant	190
Hardy, Samuel W	St. Louis	190
Harlow, Richard J, Jr.	Belton	125
***Harris, William D**	Lenexa, KS	125
Hawatmeh, Isam	St. Louis	190
Heins, James N	St. Louis	190
Hellam, Duane C	Springfield	082
Hendrickson, Barry L	St. Louis	002
Henry, Jos E	Shawnee Mission, KS	050
Herfkens, Kenneth D	Springfield	082
Hernandez, Richard P	Ellington	138
Hill, M. Robert	St. Louis	190
Himes, Joyce B	Springfield	082
Hintze, Paul F	Chesterfield	190
Hoeman, Michael D	Springfield	082
Hoeper, Samuel D, Jr.	Kansas City	125
Hoffman, Leanna M	Hamilton	078
Hoffmann, Sandra S	Chesterfield	190
Hogan, Cornelius E	St. Louis	190
Hogan, John R	St. Louis	190
Horine, Jon A	Kansas City	125
Hu, Raymond J	St. Peters	189
Huck, Richard F, Jr.	St. Louis	190
Husted, Frederick C	Springfield	082
Hyatt, Robert W	Jefferson City	058
Ibrahim, Jihad (Joe) Y	Salem	135
Inman, Max M	Chesterfield	190
Irvin, William S	Columbia	026
Jackson, Dorothy J	Gladstone	125
Jain, Poonam	St. Louis	190
Jain, Sangeeta	Jefferson City	058
Jamaluddin, Mohideen A	Festus	106
Jamison, Kimberly	Columbia	026
Jantz, Keith	Kansas City	125
Jarvis, Cathy C	Florissant	190
Javdan, Ron	St. Louis	190
Jayamanne, Damasus S	Jefferson City	058
Jedlinski, Michael T	Cape Girardeau	042
Johnson, Eric J	Chesterfield	002
Johnson, Richard L	Kansas City	125
Johnson, Warford B, II	Springfield	082
Jones, Harold L	Springfield	082
Jose, Manuel C	Kansas City	125
Joseph, Harold J	St. Louis	190
Jotte, Richard P	St. Ann	190
***Joubert, Paul M**	Lee's Summit	125
Juergens, William G	St Louis	190
Kakaiya, Ram M	St. Louis	002
Kanagawa, Harold K	Jefferson City	058
Kantor, Owen	St. Louis	190
Kardesch, Milton	St. Louis	190
Karsh, Robert S	St Louis	190
Kaufman, Robert L	St Louis	190
Kauk, Bruce A	N. Kansas City	050
Kaup, Chandra S	Florissant	190
Keairnes, Harold W	Kansas City	125
Kelly, John J	St Louis	190
Kerkemeyer, George	Hannibal	150
Khalil, Tamer G	Springfield	082
Khan, Altaf A	St. Louis	190
Khojasteh, Ali	Columbia	026
Kichura, George M	St. Louis	190
Kim, Chul	Poplar Bluff	034
King, Donald K	St. Louis	190
Kinsella, Edward D	St. Louis	190
Kinsella, Peter W	St. Louis	190
Kinsella, Ralph A, Jr.	St. Louis	190
Kipnis, David M	St. Louis	190
Kirkland, Jerry A	Kansas City	050
Kissel, John H	St. Louis	190
Kissell, Richard W	Springfield	082
Klachko, David M	Columbia	026
Klearman, Micki	St. Louis	190
Knight, William A, Jr.	St Louis	190
Knowlton, Norman P, III	Springfield	082
Kohler, Roy	Springfield	082
Kohm, Daniel G	St. Louis	190
Kolb, Lisa G	Jefferson City	058
Kopp, Kenneth R	Lenexa, KS	125
Kraetsch, Robert E	Eureka, CA	190
Kreski, Kenneth C	House Springs	190
Krewet, Frank A, III	St Louis	190
Kriegshauser, James W	St. Louis	190
Kuangparichat, Manoch	Excelsior Spgs.	118
Kuhlman, Ralph F	St. Louis	190
Kunst, Edward J	Ballwin	190
Laird, John M	St. Louis	190
LaMonda, Gary W	Columbia	026
Landau, David W	St. Louis	190
Landman, Danielle	University City	002
Landsbaum, Charles J	Jefferson City	058
Lankachandra, Bharata	Savannah	010
Latif, Azhar	Lexington	118
Lauer, Daniel J	Overland Park, KS	125
Lednicky, Jay A	Lee's Summit	125
Leeper, Sidlee W	Rocheport	026
Lehman, Robert B	St. Louis	190
Leightner, William F	St. Louis	190
Leitch, Steven M	Springfield	082
Lemery, Robert	Kansas City	125
Letizia, Wayne L	Independence	125
Levy, Morton A	St. Louis	190
Lieberman, David M	St Louis	190
Lila, Aram	Excelsior Spgs.	050
Lilly, Douglas R	St Louis	190
Lin, H T	Moberly	046
Lindeman, John F	Chesterfield	190
Llana, Angelo A	St. Joseph	030
Lockard, Orlyn O	St. Joseph	030
Loeb, Richard H	Springfield	082
Loeffler, Roberta L	St. Louis	190
Loeppky, Carol B	Columbia	026
Loggan, Michael B	Liberty	050
Long, Priscilla E	Hannibal	150
Look, Dwight C, III	Fenton	002
Loomis, James F	St. Louis	190
***Loveland, Richard D**	Hollister	208
Lovinger, Warren C, Jr.	Nevada	214

---

*Doctor of Osteopathy

INTERNAL MEDICINE

Lubowitz, Herbert	190	St. Louis
Lyons, Daniel F	082	Springfield
Lyss, Carl A	190	St. Louis
Maben, Sam E	125	Kansas City
Macleod, Angus	190	St. Louis
Majors, Patrick F	190	St. Louis
Mallouk, Alexander G	125	Kansas City
Mantell, Jack M	082	Springfield
Margolis, David M	190	St. Louis
Martin, Chris J	026	Columbia
Mass, Joan H	190	St. Louis
Mathews, Jeffrey E	190	St. Louis
Mayus, Joseph L	082	Springfield
McCarthy, Christopher	190	St. Louis
McCool, James F	190	St. Louis
McCormack, Robert E	125	Kansas City
McDonald, Wallace	030	St. Joseph
McGovney, Janice K	050	Kansas City
McKee, Wallace P	125	Kansas City
McKeel, Thomas B	125	Kansas City
McLemore, Willie O	125	Kansas City
McMillan, David L	166	Neosho
McMillen, James J	030	St. Joseph
***McNabb, M. Jeffery**	042	Cape Girardeau
Mecker, Robert	074	Washington
Mehra, Ravi	190	St. Louis
Mejia, Victor E	202	Sikeston
Meldi, Dominic M	082	Springfield
Meltz, Gary J	189	St. Charles
Mendelsohn, Robert S	190	St. Louis
Metry, Donald J, Jr.	078	Chillicothe
Mihalevich, John A, Jr.	082	Springfield
Miles, Richard W	102	Joplin
Miller, Dace L	082	Springfield
Miller, Donald	058	Jefferson City
Miller, Michael R	125	Kansas City
Mills, Melissa J	002	Overland Park, KS
Minnigerode, Turner L	125	Kansas City
Miskovsky, Emil F	190	St. Louis
Mitchell, Lynn D	026	Columbia
Mohs, Frank R	190	St. Louis
Molden, C. Scott	190	St Louis
Monaco, Michael	125	Harrisonville
Montgomery, Austin F	190	St. Louis
Moore, John M	125	Kansas City
Moriconi, William J	190	St. Louis
Morris, J. H.	125	Independence
Morton, David J	190	St. Louis
Motchan, Dennis G	190	Bridgeton
Muegge, F. David	082	Springfield
Muhammud, Faquir	190	St. Louis
Mullen, Mary E	014	Mexico
Mullican, Charles N	030	St. Joseph
Mullins, John E	190	Chesterfield
Muro, Washington S	002	Kansas City
Mutha, Sunita	002	St. Louis
Nanson, Duane	026	Columbia
Narayan, Dilip L	190	Chesterfield
Narkiewicz, Lawrence S	190	St Louis
Nelson, Donald C	082	Springfield
Nelson, J. Roger	190	St Louis
Nguyen, Khanh X	002	Kansas City, KS
Nicholas, Stephen P	190	St. Louis
Nickell, Michael D	102	Joplin
Niesen, Anna R	190	St. Louis
Nix, J. Gustave	066	Bolivar
Norland, Charles C	190	St Louis
Novack, Mark A	190	Chesterfield
Nulton, Carnie C	125	Kansas City
Nyazee, Muhammad A	190	Bridgeton
Nye, Terry R	082	Springfield
Ockner, Samuel A	190	Chesterfield
O'Connor, Mary C	125	Kansas City
O'Donnell, Susan M	174	Ste. Genevieve
O'Dowd, Mary K	002	Chesterfield
O'Keefe, James H, Jr.	125	Kansas City
Olsen, Teresa A	082	Springfield
Olson, James H	050	Liberty
Orgel, S. Michael	190	St Louis
Ortbals, David W	190	Chesterfield
Ovens, Lisa	082	Springfield
Owen, Robert F	190	St. Louis
Packman, Robert C	190	St. Louis
Palazola, Joseph M	125	Kansas City
Paletta, Frank	190	St. Louis
Paletta, Victor L	190	Bridgeton
Paone, Douglas B	125	Kansas City
Parks, Deborah L	190	St. Louis
Patel, Indu B	106	Barnhart
Patel, Prakesh B	030	St. Joseph
Peck, William A	190	St. Louis
Penkoske, Michaele M	189	St. Charles
Pereira, MaryBeth	190	St. Louis
Perez, Robert J	190	St. Louis
Perll, Michael F	125	Kansas City
Perlstein, Laurence F	190	Florissant
Perryman, J. Chris	125	Kansas City
Pfefer, Leland U	026	Columbia
Pfefferkorn, David A	202	Sikeston
Phillips, William J	190	Chesterfield
Pickering, Lee I	125	Blue Springs
Piening, Kurt A	189	St. Charles
Pierce, Dan L	026	Columbia
Pineda, Hector O	190	St. Louis
Pitts, Olevia	125	Overland Park, KS
Podolsky, Howard S	002	St. Louis
Pogson, George W, III	125	Independence
Postma, George S, Jr.	125	Shawnee Mission, KS
Potts, Dan E	190	Chesterfield
Powell, Kenneth R	082	Springfield
Prelutsky, David J	190	St. Louis
Proskey, Vincent J	190	Chesterfield
Purcell, Henry E	190	St. Louis
Purcell, Richard D	082	Springfield
Puro, Edward A	190	Florissant
Pyszczynski, Dennis R	125	Kansas City
Qureshi, Abdul R	190	St. Louis
Raju, Niranjana	174	Ste. Genevieve
Ramirez, Samuel G	190	St. Louis
Ramsey, Robert H	190	Florissant
Randolph, Kerry A	082	Springfield
Rangineni, Rajagopal	030	St. Joseph
***Rankin, Wendell D**	102	Joplin
Rau, Michael E	074	Washington
Raybould, Michael W	125	Kansas City
Razzaq, A.	190	St. Louis
Reardon, Thomas F	190	St. Louis
Redington, James C, Jr.	190	St. Louis
Redmon, Conchita M	082	Springfield
Reeder, Stephen M	082	Springfield
Reh, Edward P, Jr.	190	St. Louis
Reynolds, James A	190	Chesterfield
Rice, Karen H	058	Jefferson City
Richards, Dean D, III	125	Kansas City
Riley, Joel Y	002	St. Louis
Riojas, Lisa A	135	Rolla
Rippe, William F	030	St. Joseph
Ritter, C. J.	042	Cape Girardeau
Robben, G. Garry	190	St. Louis
Robinson, Nicholas F	070	Kennett
Robinson, Ronald L	042	Cape Girardeau
Rogers, James T	082	Springfield
Romaker, Ann M	125	Kansas City
Rosecan, Marvin	190	Belleville, IL
Rosen, Larry A	125	Independence
Rosenberg, David S	190	Florissant
Ross, Robert M	125	Kansas City
Rossiter, Thomas W	082	Springfield
Rouse, Ernest T, III	190	St. Louis
Roxas, Generoso P	189	St. Charles
Russell, John J	042	Cape Girardeau
***Ryan, Timothy J**	198	Marshall

---

*Doctor of Osteopathy

Sale, Llewellyn, Jr. St. Louis	**190**
Salibi, Habbouba Chesterfield	**190**
Samet, John M St. Louis	**190**
Samuel, George P Doniphan	**034**
Sandiford, Patrick St. Charles	**189**
Sanfelippo, John F Jefferson City	**058**
Sarma, Anuradha H Lee's Summit	**125**
Schell, James A Columbia	**026**
Scheperle, Mark A St. Louis	**190**
Scherer, Stephen Kansas City	**125**
Schierman, William D St. Louis	**190**
Schmid, Tania L St. Louis	**190**
Schmidt, Edwin H, III St. Louis	**190**
Schnarr, William St. Charles	**189**
Schneider, Paul G St. Louis	**190**
Schneider, Robert J St. Louis	**190**
Schondelmeyer, R. Wade Columbia	**046**
Schonfeld, Gustav St. Louis	**190**
Schuessler, Wolfgang P St Louis	**190**
Schuetz, Alfred St. Charles	**189**
Schultz, Irwin St Louis	**190**
Schwartzman, Neil R Lebanon	**115**
Scott, C. Alan Marshall	**198**
Scott, Michael R Springfield	**082**
Scott, Robert W Springfield	**082**
Seligman, Morris H Chesterfield	**002**
Sertl, James F St Louis	**190**
Shalet, Malcolm F Kansas City	**125**
Shapleigh, John B, II Chesterfield	**002**
Sharp, Stanley P Shawnee Mission, KS	**125**
Shatz, Burton A St Louis	**190**
Shen, Anthony S St. Louis	**190**
Sheth, Hemant K St. Joseph	**030**
Sides, Stanley D Cape Girardeau	**042**
Sigmund, Charles J, Jr. St. Louis	**190**
Singh, Kuldeep Macon	**046**
Singhal, Gokul C St Louis	**190**
Singleton, Charles M, II Kansas City	**125**
Singleton, John M, III Kansas City	**125**
Sislen, Donald R St. Louis	**190**
Sly, Anne K Kansas City	**125**
Small, Carolyn P St. Louis	**002**
Smalling, Ronnie G Springfield	**082**
Smith, Kenneth B Washington	**074**
Smith, Reid C Kansas City	**125**
Smith, Timothy W Kansas City	**125**
Smoller, Martin B St. Louis	**189**
Snavely, Sharon R Overland Park, KS	**125**
Sneid, David S Kansas City	**125**
Sollars, Eric G St. Joseph	**030**
Sommer, Rand W St. Louis	**002**
Soonattrakul, Wuthisak Kennett	**070**
Sosna, Jacob P St. Louis	**190**
Soucy, John C St. Charles	**189**
Spaedy, Tony Columbia	**026**
Spinzig, Bruce D Moberly	**046**
Spivack, Alan R Chesterfield	**190**
Sprague, Gita St. Joseph	**030**
Spurgat, Robert M St. Joseph	**030**
Squitieri, Alphonse J St. Louis	**190**
Stanford, Carol A Kansas City	**125**
Starke, Keith M St. Louis	**190**
***Steinbrecher, Janis M** Lee's Summit	**125**
Sterkel, Barbara B St. Louis	**190**
Sterkel, Richard L St. Louis	**190**
Stewart, James L Weatherby Lake	**050**
Strauss, Carl F Kansas City	**125**
Stringfield, Barry D Springfield	**082**
Stronach, Linda L St. Louis	**190**
Stuber, Robert R St. Joseph	**030**
Stufflebam, Robert E Springfield	**082**
Subramanian, S. Carthage	**102**
Sullivan, William W St. Louis	**190**
Suva, Morfeo M Springfield	**082**
Suwannasri, Rudee St. Louis	**190**
Swaykus, Bernard T Bridgeton	**190**
Sylvanovich, W. Richard St. Louis	**190**
Taege, Alan J St. Joseph	**030**
Tanphaichitr, Kongsak St. Louis	**190**
Tansuwan, Chukiat St. Louis	**190**
Taylor, William K Springfield	**082**
Tella, Nalini Kansas City	**125**
Tepper, Arnold St Louis	**190**
Thesing, John A Lenexa, KS	**125**
Thondapu, Vanaja R Iowa City, IA	**026**
Tilson-Mallett, Nancy R Kansas City	**125**
Titterington, Frank W Kansas City	**125**
Tobin, Garry S St. Louis	**190**
Tominack, Rebecca L St. Louis	**190**
Torontow, R. John Nevada	**214**
Toubes, Daniel B Kansas City	**125**
Trentham, Orin P, III Joplin	**102**
Troeh, Melvin R Independence	**125**
Trotter, W. Yates Springfield	**082**
Tucker, Leslie E Washington	**074**
Turner, Glenn O Springfield	**082**
Tuteur, Peter G St. Louis	**190**
Uchiyama, Robert C Chesterfield	**190**
Uhrig, Jack R Marshall	**198**
***Vale, Janett A** Leawood, KS	**125**
Valverde-Mejia, Mary J Sikeston	**202**
Van Voor, Catherine M Columbia	**026**
VanGoidsenhoven, Guy E St Louis	**190**
Varma, Devendra K Poplar Bluff	**034**
Vazquez, Jose L St. Louis	**002**
Ver Dugh, Ammon L Lee's Summit	**125**
Vibulakaopun, Pairat Bonne Terre	**138**
***Vogelsang, Judith K** Kansas City	**125**
Vournas, George C Bridgeton	**190**
Wade, Kim C Kansas City	**125**
Wagan, Primitiva C St. Louis	**190**
Wald, Stanley M St. Louis	**190**
Walden, James M Kansas City	**125**
Walker, Harvey, Jr. St. Louis	**190**
Walker, Melvin O, Jr. Springfield	**082**
Walsh, James W St. Louis	**190**
Wantuck, Donald K Springfield	**082**
Webb, Karen B St. Louis	**190**
Weinstock, Leonard B St. Louis	**190**
Welsh, Thomas E, III Mexico	**014**
Welton, Stephen T Sikeston	**202**
Wenneker, Alvin S St. Louis	**190**
Werner, William A St. Louis	**190**
Westhoff, David D Jefferson City	**058**
Weyerich, Noel F St Louis	**190**
Whitman, Daniel S Kansas City	**125**
Wientzen, Arthur S Kansas City	**125**
Wiggins, Stanley D Springfield	**082**
Wilkins, Michael S Kansas City	**125**
Williams, R. Jerome, Sr. St. Louis	**190**
Williams, Roy J, Jr. St. Louis	**190**
Wilt, David A Kansas City	**125**
Winer, Nathaniel Kansas City	**125**
Woeltje, Keith F St. Louis	**190**
Wolfe, John E Springfield	**082**
Wolff, Gerald A St. Louis	**190**
Woolery, William G Sedalia	**178**
Wright, Jeffrey M St. Louis	**190**
***Wright, Robert A** St. Louis	**190**
Wright, William P St. Louis	**190**
Wuellner, David H Sedalia	**178**
Wurster, Mark W Kansas City	**125**
Yu, Simon M St. Louis	**190**
Zerr, Charles H Independence	**125**
Zimmerman, Herbert B St Louis	**190**
Zylka, J. Michael St. Louis	**190**

---

*Doctor of Osteopathy

Maternal & Fetal Medicine (MFM)

Dix, Patricia M	**082**	Springfield
Hess, L. Wayne	**026**	Columbia

Neonatal-Perinatal Medicine (NPM)

Braun, William J	**125**	Kansas City
Gratny, Linda L	**002**	Leavenworth, KS
Pettett, Gary	**125**	Kansas City
Slack, Melinda R	**082**	Springfield
Thibeault, Donald W	**125**	Kansas City

Nephrology (NEP)

Benson, Larry E	**050**	N. Kansas City
Birenboim, Nancy	**125**	Kansas City
Braxton, Frank W	**042**	Cape Girardeau
Langley, Harriet S	**125**	Kansas City
Mir, A. Rauf	**125**	Kansas City
Nolph, Karl D	**026**	Columbia
Redington, James C	**050**	N. Kansas City
Thomas, Alexis G	**125**	Kansas City
Winkelmeyer, William K	**026**	Columbia
***Young, Michael A**	**058**	Jefferson City

Neurology (N)

Abrams, Bernard M	**125**	Kansas City
Adelmann, Eugene	**190**	St. Louis
Ali, Syed S	**190**	Granite City, IL
Andrew, Christopher R	**102**	Joplin
Applegate, Clara	**206**	West Plains
Arkin, Steven M	**125**	Kansas City
Arora, Ravinder S	**178**	Sedalia
Asher, Irving M	**026**	Columbia
Awadalla, Sylvia	**190**	St. Louis
***Belson, Ian L**	**125**	Kansas City
Berg, Leonard	**190**	St. Louis
Bettinger, Irene E	**125**	Kansas City
Bhothinard, Bhisit	**034**	Poplar Bluff
Black, Joseph T	**190**	St Louis
Brownsworth, Ronnie D	**082**	Springfield
Choi, Dennis W	**190**	St. Louis
Chou, Wesley H	**002**	Overland Park, KS
Clifford, David B	**002**	St. Louis
Davuluri, Sreenadha R	**030**	St. Joseph
Dean, Philip D	**014**	Washington
Desio, Marcus A	**102**	Joplin
Dexter, James D	**026**	Columbia
Dooley, Joseph M, Jr.	**190**	St. Louis
Downs, Mary K	**082**	Springfield
Epstein, Beverly	**166**	Mt. Vernon
Eyerman, Edward L	**190**	St. Louis
Geller, Bruce D	**125**	Kansas City
Hackett, Earl R	**082**	Springfield
Hanaway, Joseph	**190**	St Louis
Hardin, William B	**190**	St. Louis
Hatlelid, J. Michael	**190**	St. Louis
Hoffmann, Lee M	**125**	Shawnee Mission, KS
Hogan, Patrick A	**190**	St Louis
Hooshmand, Ahmad	**058**	Jefferson City
Horenstein, Simon	**190**	St. Louis
***Hosley, Brett D**	**150**	Hannibal
Lee, David Y	**042**	Cape Girardeau
Legarda, Maria M	**125**	Kansas City
Lin, Chi-Hsi	**082**	Springfield
Luzecky, Michael H	**082**	Springfield
Makos, Mignon M	**030**	St. Joseph
Malkoff, Marc D	**190**	St. Louis
Margolis, Robert P	**190**	St. Louis
Matovich, Violet B	**125**	Kansas City
McLaren, David L	**026**	Columbia
***Mellies, Steven D**	**042**	Cape Girardeau
Moreng, George R	**125**	Kansas City
Myers, Gary H	**190**	Chesterfield
Naseer, Riaz A	**190**	Granite City, IL
Pentella, Karen J	**190**	St. Louis
Phillips, Daniel	**190**	St. Louis
Prentice, Anibal F	**125**	Kansas City
Quinn, Rodney D	**082**	Springfield
Reisler, David M	**190**	Chesterfield
Reiss, Jeanne E	**125**	Kansas City
Robinson, Jay G	**125**	Kansas City
Rosenbaum, Herbert E	**190**	St. Louis
Rowe, Vernon D, III	**125**	Kansas City
Rymer, Marilyn M	**125**	Kansas City
Sahota, Pradeep K	**026**	Columbia
Sanchez, Abelardo B	**190**	St. Louis
Schreiber, David J	**190**	Alton, IL
Schultz, Earl R	**190**	St Louis
Selhorst, John B	**190**	St. Louis
Shakil, Mohammad	**042**	Cape Girardeau
Sher, Allyn L	**026**	Columbia
***Sherrod, Glenn M**	**190**	Bridgeton
Shuter, Eli	**190**	St Louis
Simowitz, Fredric M	**189**	St. Charles
Sohn, Richard	**190**	St. Louis
***Stahly, Randall L**	**042**	Cape Girardeau
Verona, Montgomery A	**082**	Springfield
Weinstein, Charles L	**125**	Kansas City
Weiss, Howard	**190**	St Louis
Weiss, Stuart	**190**	St Louis
White, Harry H	**026**	Columbia
Winkler, Terry	**082**	Springfield
Wong, George F, III	**082**	Springfield
Yanover, Robert A	**190**	St. Charles
Yu, Mario K	**125**	Kansas City
Zimmerman, Devin D	**190**	South Bend, IN

Neurological Surgery (NS)

Albanna, Faisal J	**190**	St. Louis
Anderson, Sue K	**125**	Prairie Village, KS
Backer, Robert J	**190**	St. Louis
Bailey, Gregory J	**190**	St. Louis
Beatty, Robert M	**125**	Kansas City, KS
Bernardi, Robert J	**190**	St. Louis
Blatt, Geoffrey L	**125**	Kansas City
Boland, Michael F	**190**	Chesterfield
Bondurant, Charles P	**026**	Columbia
Briggs, Thomas B	**082**	Springfield
Bucholz, Richard D	**190**	St. Louis
Canlas, Mario P	**082**	Springfield
Chaudhari, A. Basit	**042**	Cape Girardeau
Cheung, K. Charles	**042**	Cape Girardeau
Chilton, Jonathan D	**125**	Kansas City
Clough, Charles A	**125**	Kansas City
Colapinto, Edward V	**026**	Columbia
Cole, Harry O	**190**	Chesterfield
Cox, Curtis S	**058**	Jefferson City
Coxe, William S	**190**	St Louis
Crabtree, H. Mark	**082**	Springfield
Crafts, David	**190**	St. Louis
Dacey, Ralph G, Jr.	**190**	St. Louis
Daus, Arthur Steve	**102**	Joplin
Ditmore, Q. Michael	**026**	Columbia
Dunn, Robert C, Jr.	**190**	St. Louis
Ferguson, John F	**082**	Springfield
Gall, Clifford M	**125**	Kansas City
Geise, August W	**190**	Chesterfield
Gold, Jonathan A	**190**	St. Louis
Goldring, Sidney	**190**	St. Louis
Greenberg, Jeffrey A	**102**	Joplin
Grubb, Robert L, Jr.	**190**	St. Louis
Hanson, E. J.	**125**	Kansas City
Hoffman, William F	**190**	St. Louis

---

*Doctor of Osteopathy

Hornig, Gregory W Kansas City	125
Jacob, Karl A St. Louis	190
Jimenez, David F Columbia	026
Kaufman, Andrew B Kansas City	125
Kaufman, Bruce A St. Louis	190
Kennedy, David G St. Louis	190
Ketcherside, W. Joseph N. Kansas City	050
Kim, Yong Ki Cape Girardeau	042
Krettek, John E Chesterfield	190
MacGee, Edwin E Kansas City	125
Majzoub, Hish S Joplin	102
Marchosky, J. Alex Chesterfield	190
Martin, Stanley B St. Charles	190
Mendelsohn, George E Chesterfield	190
Mollman, H. Dennis Chesterfield	190
Morantz, Robert A Kansas City	125
Mujica, Patricio H St. Joseph	030
Nichols, Margaret E Joplin	102
Oro, John J Columbia	026
Orth, O. Gerald Columbia	026
Park, Bert E Springfield	082
Picker, Selwyn St. Louis	190
Pittmann, Thomas St. Louis	190
Reintjes, Stephen L Kansas City	125
Rich, Keith M St. Louis	190
***Routsong, Rodney T** St. Louis	190
Schoolman, Arnold Kansas City	125
Scodary, Daniel J Bridgeton	190
Sheehan, Paul J Bridgeton	190
Silbergeld, Daniel L St. Louis	190
Smith, Edward B Kansas City	125
Smith, Howard L Ocean Springs, MS	026
Smith, Kenneth R, Jr. St. Louis	190
Stohr, Paul E St. Charles	190
Vollmer, Dennis G St. Louis	190
Walker, Francis S St. Louis	190
Walker, Gregory E Independence	125
Whitlock, C. Courtney Springfield	082
Wilkinson, David St Louis	190
Yoon, Kong-Woo St. Louis	190
Young, Paul H St. Louis	190

Neurology, Pediatric (NSP)

Ashkenasi, Arie Springfield	082

Nuclear Medicine (NM)

Egbert, Robert N Springfield	082
Gotti, Edward W Springfield	082
Ho, Judith E St. Louis	190
Long, Stephen E Springfield	082
Siegel, Barry A St. Louis	190

Nuclear Radiology (NR)

Hacker, Douglas A Springfield	082

Obstetrics & Gynecology (OBG)

Ahlering, Christopher L St. Louis	190
Ahlering, George P St. Louis	190
Ahlum, Sandra J Hannibal	150
Ahmad, Nusrat J Ballwin	190
Anstey, George C St. Ann	190
Anstey, John T St. Ann	190
Appelbaum, John K St. Louis	002
Arias, Fernando St Louis	190
Bagwe, Lata R St. Louis	190
Baldwin, Richard M Springfield	082
Bale, Robert D St. Louis	190
Barloon, James H Kansas City	125
Batts, Barbara A Kansas City	125
Baumann, Daniel J St. Louis	190
Beaty, William R St. Ann	190
Becker, Robert L St. Louis	190
Belew, Joe E Chesterfield	190
Bell, Laird A Springfield	082
Benitez, Jose A St. Louis	190
Benson, Ronald G Springfield	082
Benton, Mary Beth Columbia	026
Bernabe, Florinio H St. Louis	190
Bever, Grant A St. Louis	190
Blaskiewicz, Robert J St. Louis	190
Blythe, James G St Louis	190
Boedeker, James P St. Louis	190
Boice, Michelle A Joplin	102
Bonebrake, Albert J Springfield	082
Bonebrake, Mac D Springfield	082
Boone, Vicky L Springfield	082
Bopp, J. Ronald Joplin	102
Borello, Dan J Joplin	102
Botney, Kathryn Chesterfield	190
Boveri, Jos C St Louis	190
Boveri, Lawrence V St. Louis	002
Boyd, Craig W St. Louis	190
Braby, Howard H Independence	125
Brennan, James M St. Louis	190
Brennan, Robert A, Jr. St. Louis	190
Brown, Cynthia L Poplar Bluff	034
Brown, Robert J St. Charles	189
Bruno, Patrick L Hannibal	150
Burks, Michael L Columbia	026
Burstein, Robert St. Louis	190
Camejo, Manuel Springfield	082
Cannon, Jenifer M St. Louis	002
Caruso, Alfred A Kansas City	125
Casey, Arthur L St. Louis	190
Cernik, Christine M St. Louis	190
Chaudhuri, Sudha T Kansas City	125
Chesney, John W Joplin	102
Chirino, Octavio R St. Louis	190
Chod, Ronald J Chesterfield	190
Clark, Larry K Joplin	102
Clarke, Paul W Cape Girardeau	042
Cohen, Robert S St. Louis	190
Comas, Manuel R St. Louis	190
Cooper, Robert L, II Warrensburg	110
Coordes, Kathleen M St. Louis	190
Corder, Robert L St. Joseph	030
Cornwell, Karen R Kansas City	125
Covarrubias, Jorge A Collinsville, IL	190
Cox, Jeffrey L Joplin	102
Coyne, Patrick M Bridgeton	190
Crane, James P St. Louis	190
Dagartzikas, A. K. St. Louis	190
Dahm, Charles H, Jr. St. Louis	190
Daly, James W Columbia	026
Davidson, Raymond P St. Louis	190
Del Pizzo, Ferdinand St. Charles	189
Dement, Oman E Joplin	102
Dent, George W Farmington	138
DeRosa, Michael J St. Louis	190
DeUngria, Pablo C Bridgeton	190
Dieterich, Russell B St. Charles	189
Dilts, Preston V, Jr. Kansas City	125
Doan, Laura B Raytown	125
Duncan, David T St. Peters	189
Dunlap, Patrick S Joplin	102
Durel, Justin H St. Louis	190
Eachempati, Uma R Florissant	190
Eaton, Paula Kansas City	125
Ekunno, Josiah O St. Louis	190
Fast, Robert E St. Joseph	030
Ferber, Alan J Kansas City	125
Ferns, Francis E Kansas City	125
Ferris, Robert E Jefferson City	058
Fleer, Gerald K St. Peters	189
Fogle, Philip R Springfield	082
Fortin, Jorge A Rolla	135

---

*Doctor of Osteopathy

OBSTETRICS & GYNECOLOGY

Friesen, Randall G St. Charles	189
Gall, Ira C St. Louis	190
Gardner, Joe A Joplin	102
Garrard, Jacqueline M St. Louis	190
Garrison, David L St. Joseph	030
Gay, John W Columbia	026
Gibb, Randall K St. Louis	190
Gimpelson, Richard J Chesterfield	190
Goeking, C. Keith St. Joseph	030
Goldman, Gordon M St. Louis	190
Grace, Steve Springfield	082
Grant, Laura L Columbia	026
Grant, Mark Columbia	026
Gray, Diana L St. Louis	002
Grebe, T. Keith Joplin	102
Green, Thomas F Independence	125
Griffin, William T Columbia	026
Grimm, Mary T Florissant	190
Gulick, C. Richard St Louis	190
Gutknecht, Richard Independence	125
Hahn, Yoram Florissant	190
Halberstadt, Cathanie W Kansas City	125
*Hamilton, William V Lexington	118
Handler, Michael R St. Louis	190
Hanley, Thomas P St. Louis	190
Harms, Lawrence L St. Louis	046
Hartman, Richard A St. Louis	190
Hauser, Robert J Jefferson City	058
Hayes, Kimberly W Lee's Summit	125
Hazan, Joseph Bridgeton	190
Heilman, M. Kathlyne Springfield	082
Heller, Randall L, Jr. St. Louis	190
Herzog, Godofredo M Florissant	190
Hickey, James L St. Louis	190
Hill, Randy C Springfield	082
Hoja, John M Poplar Bluff	034
Hoja, W. Alex Poplar Bluff	034
*Holman, Richard S Maryville	158
Houck, William E Chesterfield	190
Hubbell, George P Osage Beach	120
Hulbert, Laura R St. Louis	190
Hunleth, Frank E St. Louis	190
Huse, William J, II Kansas City	125
Huster, Robert M Liberty	135
Ishida, Yasuo St Louis	190
Jackson, Darwin C Florissant	190
Jantsch, Deborah A Kansas City	125
Jessup, Michael J Cape Girardeau	042
Jewell, Gregory L St. Louis	002
Johar, Ravi S St. Louis	190
Johnson, Jos C, Jr. Springfield	082
Johnson, Rebecca S Kansas City	125
Jones, Jeffrey T Joplin	102
Jones, Michael D Mexico	014
Kaufmann, Herbert H Kansas City	125
Keay, Myoung So Chillicothe	078
Kelly, John B Joplin	102
Kessel, James W St. Louis	190
Kim, Yang H Washington	074
Kline, James St. Joseph	030
Kobbermann, Kobby J Springfield	082
Kovac, S. Robert Dayton, OH	190
Kraner, Justin F St. Louis	190
Kratz, Donald P Springfield	082
Kuebel, Richard J St. Louis	190
Kumari, Vijaya St. Louis	190
Lacey, Hugh L Joplin	102
Lamping, J. Daniels St. Louis	190
*Lentz, Rodney D Jefferson City	058
Levy, Edward S St. Louis	002
Lim, Piemsak St. Louis	190
Lin, C. H. Moberly	046
Lintecum, Frederick B Kansas City	125
Liu, Ben C Kansas City	125
Llorens, Alfred S Columbia	026
Lockwood, Gary F Kansas City	125
Madduri, Aruna D Poplar Bluff	034
Magaletta, George E St. Louis	002
*Magill, William S Springfield	082
Maitz, Carlos A St. Ann	190
Maminta-Streiff, Maria G St. Louis	190
Mani, Mary E Clayton	190
Marshall, William H Jefferson City	058
Marston, F. James St. Joseph	030
Martin, Daniel J St. Louis	190
Mathew, Ruby Chesterfield	190
Matile, Gerald U Kansas City	125
Maupin, Kathy C St. Louis	190
Maxson, Katherine A Chesterfield	190
Maynard, Colleen M Kansas City	125
McCorcle, Marcus D Springfield	082
McDavid, Robert E Columbia	026
McGuire, Thomas H Shawnee Mission, KS	125
McLaughlin, Richard D Springfield	082
Medler, John F St Louis	190
Meiners, Theodore M Chesterfield	190
Middleton, Jerry N Chesterfield	190
Miller, Gerald L, Jr. Kansas City	125
Mistry, Tehmton S Columbia, IL	190
Moeller, F. Delbert Lake St. Louis	189
Monterubio, Fred R, Jr. St. Louis	190
Montoya-Vinluan, Aurea C Raytown	125
Mooney-Smith, Patricia Kansas City	125
Moore, Julie A Independence	125
Moreton, David W Columbia	026
Morley, Mary A Chesterfield	190
Mou, Susan M Kansas City	125
Muckerman, Richard C, II St. Louis	190
Mundy, David C Kansas City	125
Murdock, Nathaniel St. Louis	190
Myers, Ivan T St. Louis	190
Nagy, Rickey E Kansas City	125
Neimark, Roy P Sedalia	178
Newport, Gerald Florissant	190
Nickell, Margaret B Kansas City	125
Nouhan, Joseph G, Jr. St. Louis	190
Ojascastro, Lou St. Louis	190
Ong, Ofelia S St. Louis	190
Ostapowicz, Tamara L St. Louis	190
Ott, Harold J St Louis	190
Ott, William J St. Louis	190
Otto, William J Springfield	082
Padilla, Teresita C Chesterfield	190
*Palmer, Allen S Bridgeton	190
Patty, Carl F Poplar Bluff	034
*Patty, John R Poplar Bluff	034
Pearce, Eugene W. Kansas City	125
Pearman, Carl C Kansas City	002
Pearse, Carlton S Chesterfield	190
Pearson, William E St. Louis	190
Penney, Larry L Columbia	026
Perryman, Douglas R Kansas City	125
Pignotti, Blase J St. Louis	190
Poole, Anthony G Sikeston	202
Potts, Gregory A Washington	074
Powell, Lisa G Springfield	082
Pringle, Scot G Cape Girardeau	042
Pyeatte, Jacob P, Jr. Cape Girardeau	042
Rajcher, Wilma J Columbia	026
Rappold, Henry O Chesterfield	190
Redfern, David L Springfield	082
Reed, Jonathan R St. Louis	190
Rengachary, Dhanalakshmi Kansas City	125
Rennard, Marvin St. Louis	190
Rice, Lee Ro Joplin	102
Rice, Valerie M Kansas City, KS	050
Richardson, Curtis J St. Joseph	030
Riley, Louis T Sevierville, TN	190
Riojas, James E Rolla	135
Ritter, Hubert A St. Louis	190
Robinson, Gary L Springfield	082
Robinson, Van M Marshall	198

---

*Doctor of Osteopathy

Roter, Alexander M St. Charles	189
Sachar, Jerome D St. Louis	190
Saha, Sudha R St. Louis	190
Sauvage, Jacques P St Louis	190
Schaberg, Kevin B Chesterfield	190
Schillie, Gene A Kansas City	125
***Schooler, Richard D** Joplin	102
Schuetz, Evelyne G St. Charles	189
Schwartz, Howard I Kansas City	125
Seeck, Linda E Washington	074
Shaner, Thomas P St. Louis	190
Shelton, Becky R Chesterfield	190
Shroff, Kumkum St. Louis	190
Shultz, Thomas M Springfield	082
Siripipat, Pallop Mexico	014
Smiley, William L St. Louis	190
Smith, Brenda S Kansas City	125
Snidle, William F Crystal City	106
Snowden, Kent L St. Louis	190
Sopuch, John A St. Louis	190
Sowash, James J Columbia	026
Spradlin, Larry D Kansas City	125
Steiman, Barry Creve Coeur	189
Stockwood, Robert C Sedalia	178
Strobach, Kurt F St. Louis	190
Stuppy, Mark S Springfield	082
Su, Philo S Jefferson City	058
Sullivan, Bradley H Kansas City	125
Sunderji, Shiraz St. Louis	190
Taute, Hermann St. Louis	190
Tendai, Mark M Springfield	082
Thompson, M. Bryant Chesterfield	190
Thornton, Michael K Ste. Genevieve	174
Tobey, Albro C, Jr. St. Louis	190
Tobler, Randall W St. Louis	190
Trammell, Lee W Columbia	026
Triplett, Daniel A Liberty	050
Trumbower, William D Columbia	026
Turano, William L Raytown	125
Vajaranant, Manit Lexington	118
Van Dyk, Elmer H Sedalia	178
Villamar, Elizabeth N St. Louis	190
Vivian, Gary D St. Peters	189
Wagner, Daniel G Chesterfield	002
Walker, Gary K Springfield	082
Walker, J. Leslie St. Louis	190
Wallace, Darryl L Kansas City	125
Walley, Lynn J Hannibal	150
Walsh, Barbara A St. Louis	190
Wasserman, Gary M St. Louis	190
Wasserman, Mark S St. Louis	190
Weinstein, David L St. Louis	190
Wheeler, Paul D Liberty	050
White, Eugene F Rolla	135
Whitten, J. Stephen Cape Girardeau	042
Wilbois, Ronald P St. Louis	190
Williams, Fred Columbia	026
Williams, John W, IV Springfield	082
Winer, Herbert J Kansas City	125
Winkelmann, Susan E Columbia	026
Wolff, Ray J Bridgeton	190
Wright, Andy J Springfield	082
Wyrsch, Leo M Springfield	082
Yahnke, David G Farmington	138
Yang, John S Ste. Genevieve	174
Yarwood, Robert L Lake St. Louis	189
Yazdi, Tom M St. Louis	190
Yeast, John D Kansas City	125
Yoon, Jin S Chillicothe	078
Youngblood, James P Kansas City	125

Occupational Medicine (OM)

Armbruster, A. A. Stilwell, KS	002
Baker, John H St. Louis	190
Beeks, John W Kansas City	125
***Bynum, Carl G** Jefferson City	058
***Cooper, Glen E** Columbia	026
Hughes, Robert G St. Louis	190
Kopp, Shelby K St. Louis	190
Meadows, C. Douglas St. Louis	190
Paff, David G Springfield	082
Patel, Ashokkumar B St. Louis	190
Stenberg, Michael D Kansas City	002
Vale, Janie R Columbia	026
Welter, Eugene S Lee's Summit	125

Oncology (ON)

Abdou, Nancy L Kansas City	125
Carolla, Robert L Springfield	082
Cipperly, Vaughan R Joplin	102
Cox, W. Welby Springfield	082
Cunningham, William F Springfield	082
Fleming, Allan R Kansas City	125
Glauber, James G St. Louis	002
Hanson, Karl H Kansas City	125
Honeycutt, Pamela J Columbia	026
Hoos, Gary L Springfield	082
Janney, Stephen K St. Louis	190
LaFrancis, Irving E Joplin	102
Matthews, Richard H Rolla	135
Morris, R. William St. Louis	190
Mundis, Richard J Kansas City	125
Myron, Mark C Kansas City	125
Ota, David M Columbia	026
Perry, Michael C Columbia	026
Picus, Joel St. Louis	002
Schlossman, David M Columbia	026
Schultz, Paul K St. Louis	190
Skelley, Mark J Joplin	102
***Stillie, G. Donald** Kansas City	125
Van Ambur, Albert L, III Chesterfield	190
Yuen, Benjamin H Cape Girardeau	042

Ophthalmology (OPH)

Amin, Navin J St Louis	190
Arnold, Paul N Springfield	082
Arribas, Neva P St. Louis	190
Assil, Kerry K St. Louis	190
Avins, Laurence R St. Louis	190
Barnes, Charles H Kansas City	125
Bass, Walter R Raytown	125
Bauman, Alan E Kansas City	125
Becker, Bernard St. Louis	190
Becker, Rolfe A Kansas City	125
Becker, Stanley C St. Louis	190
Becker, William L St. Louis	190
Benedett, Robert E Springfield	082
Berdy, Gregg J St. Louis	190
Berg, Edward F Chesterfield	190
Blinder, Kevin J Columbia	026
Bohigian, George M St. Louis	190
Bonham, Roger D Columbia	026
Boniuk, Isaac St. Louis	190
Bowen, Stephen F, Jr. St Louis	190
Brady, Harry R St Louis	190
Brigham, David W Ballwin	190
Bruce, Leo A Sikeston	202
Burgess, Dean St. Louis	190
Byars, Steven R Kansas City	125
Canaan, Samuel A, Jr. St Louis	190
Case, William F Kansas City	125
Catanzaro, Frank J, Jr. St. Louis	190

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*Doctor of Osteopathy

OPHTHALMOLOGY

Cavanaugh, Timothy B Kansas City	**125**
Chavala, Sudarsan Maryville	**158**
Cheek, Charles W Columbia	**026**
Chipongian, Raul A St. Louis	**190**
Chishti, M. Ishaq St. Louis	**190**
Chu, Fred C Chesterfield	**190**
Chung, Sophia M St. Louis	**190**
Cibis, Gerhard W Kansas City	**125**
Clever, Victor G St. Charles	**189**
Cohen, Bruce H St. Louis	**190**
Cokingtin, Cliff Overland Park, KS	**125**
Couch, Jeffrey M N. Kansas City	**002**
Cowden, John W Columbia	**026**
Cozean, Charles H Cape Girardeau	**042**
Cundiff, H. Clay Independence	**125**
Curran, Terrence Kansas City	**125**
Davisson, Walter F Jefferson City	**058**
Dehning, Doug O Independence	**125**
Del Prior, Lucian V St. Louis	**002**
Deligeorges, John Kansas City	**050**
Drews, Robert C St Louis	**190**
Durrie, Daniel S Kansas City	**125**
Eggleston, Harry C St. Louis	**190**
Eggleston, Thomas F St. Louis	**190**
Ellis, Jean H Blue Springs	**125**
Escoffery, Richard F Florissant	**190**
Faulkner, C. Byron Springfield	**082**
Fitz, John R Farmington	**138**
Ford, Thomas E Niagara Falls, NY	**190**
Gabel, Michael G St. Louis	**190**
Gans, Lawrence A Florissant	**190**
Gessler, James A Springfield	**082**
Giangiacomo, Joseph Columbia	**026**
Gigantelli, James W Columbia	**026**
Goldstein, Marvin F Kansas City	**125**
Goltschman, John P Florissant	**190**
Goodrich, Steven D Florissant	**190**
Gordon, James M Florissant	**190**
Grand, M. Gilbert St. Louis	**190**
Green, Morton R Belleville, IL	**190**
Hagan, John C, III N. Kansas City	**050**
Hart, William M, Jr. St. Louis	**190**
Hartstein, Jack Chesterfield	**190**
Harvey, Judith E Springfield	**082**
Hembree, Kathryn A Liberty	**050**
Holds, John B St. Louis	**190**
Holekamp, Timothy Columbia	**026**
Holme, Robert J Farmington	**138**
Horton, Bill G Springfield	**082**
Hubbard, Kathryn R Sedalia	**178**
Hunkeler, John D Kansas City	**125**
Johnson, Lenworth N Columbia	**026**
Jones, Robert W West Plains	**206**
***Jordan, Earl L, Jr.** Joplin	**102**
Jung, J. Marshall Cape Girardeau	**042**
Kamenetzky, Stephen A St. Louis	**190**
Kaplan, Henry J St. Louis	**190**
Kass, Michael A St. Louis	**190**
Kayes, Jack St Louis	**190**
Kenneally, Cynthia Z St. Louis	**190**
Kies, Richard L Cape Girardeau	**042**
Knopf, Harry L St. Louis	**190**
Koenig, Marvin I St. Louis	**190**
Kolker, Allan E St. Louis	**190**
Korenfeld, Michael S Washington	**074**
Kretchmar, Alan P St Louis	**190**
Krummenacher, Thomas K St. Louis	**190**
Landhuis, Leo R Columbia	**026**
Lederer, Charles M, Jr. Kansas City	**125**
Lee, King Y Shawnee Mission, KS	**125**
Leibsohn, Joel M Independence	**125**
Lentz, Kathy J Washington	**074**
Levenson, Ernest Poplar Bluff	**034**
Lewis, Matthew T Jefferson City	**058**
Lewis, Robert D St. Louis	**190**
Linde, John W Rolla	**135**
Lubniewski, Anthony J St. Louis	**190**
Luetkemeyer, James G Columbia	**026**
Lyon, David B Kansas City	**125**
Matta, Camille S Kansas City	**125**
Mattax, James B, Jr. Springfield	**082**
McCabe, Eugene J St. Charles	**189**
McGonigle, James P Joplin	**102**
McKnight, Scott J Liberty	**050**
McLaughlin, Durnell Kansas City	**125**
Mehlhorn, Gary L Springfield	**082**
Meredith, William R Joplin	**102**
Meyer, Melvin E St Louis	**190**
Michaels, Robert H Springfield	**082**
Milder, Barry D St. Louis	**190**
Miller, James E St. Louis	**190**
Morey, Kirk P St. Louis	**190**
Morgan, Stephan S St. Louis	**190**
Morrison, Tom V Branson	**208**
Murphy, James A St. Joseph	**030**
Neu, Kenneth W Springfield	**082**
Neu, Leo T, III Springfield	**082**
Newman, Matthew St. Louis	**190**
O'Donnell, Francis E St. Louis	**190**
Olk, R. Joseph Chesterfield	**002**
Olson, E. Rule Springfield	**082**
Ott, F. Thomas St. Louis	**190**
Parelman, Joseph J Kansas City	**125**
Pastor, Scott A Kansas City	**125**
Pepose, Jay S St. Louis	**002**
Perlmutter, John C St. Charles	**189**
Pernoud, Flavius G, III St. Louis	**190**
Pernoud, Joan M St. Louis	**190**
Peterson, Craig A Springfield	**082**
Piebenga, Larry W Kansas City	**125**
Place, Kenneth C Kansas City	**125**
Plowman, Edward M Hannibal	**150**
Pojanasomboon, Pichat Rolla	**135**
Prater, Thomas G Springfield	**082**
Price, Patrick K Shawnee Mission, KS	**125**
Purcell, John J, Jr. St Louis	**190**
Rahman, Moududur Chesterfield	**190**
Reddy, Nalini A West Plains	**206**
Rednam, Krishnarao V Kirkwood	**190**
Revels, Harry R, III Leawood, KS	**125**
Ridgeway, William G St. Louis	**190**
Rieger, Frank G Columbia	**026**
Ringer, C. Nelson Cape Girardeau	**042**
Rogers, Casey Mexico	**014**
Rosenthal, William N Kansas City	**125**
Sabates, Felix N Kansas City	**125**
Sabates, Nelson R Kansas City	**125**
Salmon, M. L. St. Louis	**190**
Samudrala, Ramulu St. Louis	**190**
Schanzlin, David J St. Louis	**190**
Schoch, Lawrence H Florissant	**190**
Schoengarth, Lowell D Columbia	**026**
Schrenk, Loren C St. Louis	**190**
Scott, Wendell J Springfield	**082**
Shah, Anwar St. Louis	**190**
Shah, Ramesh R Joplin	**102**
Shelton, R. Wayne Springfield	**082**
Shields, Steven B St. Louis	**190**
Short, Howard N Washington	**074**
Siegfried, Carla J St. Louis	**190**
Sigmund, Charles A Bridgeton	**190**
Silver, Bernd St Louis	**190**
Silverstein, Steven M Kansas City	**125**
Slocum, Stephen G St. Louis	**190**
Smith, Morton E St. Louis	**190**
Smith, Porter Poplar Bluff	**070**
Spalding, David L Springfield	**082**
Spalding, Wilber B, Jr. Kansas City	**125**
Spurrier, Mark H St. Louis	**190**
Stafford, Walter R St. Louis	**190**
Stauffer, Larry K Jefferson City	**058**
Stewart, L. Paul St. Louis	**190**

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*Doctor of Osteopathy

Stiles, Michael C	125	Leawood, KS
Stout, Carl N	125	Independence
Takagi, Brian K	135	Rolla
Taylor, John R.W	125	Kansas City
Tekwani, Hiralal T	190	St. Louis
Tess, Allen F	190	Florissant
Thomas, Matthew A	190	St. Louis
Tobin, Robert F	030	St. Joseph
Traxel, William L	034	Poplar Bluff
Tyler, Thomas D	118	Lexington
Unwin, Donald R	190	St. Louis
Walker, Rebecca S	190	Blandon
Walline, T. Andrew	125	Kansas City
Walter, William L	190	St Louis
Wankum, Robert P	058	Jefferson City
Watson, Richard A	030	St. Joseph
Wax, Martin B	190	St. Louis
Weir, Robert K	125	Kansas City
Westrich, David J	042	Cape Girardeau
Wexler, Stephen A	190	St. Louis
Whitacre, Marc M	125	Kansas City
White, William L	125	Kansas City
Wiles, Stephen B	125	Kansas City
Wills, Theodore E	026	Columbia
Windsor, Charles E	190	St Louis
Wolf, Mitchel L	190	St. Louis
Wurster, Jerry B	125	Leawood, KS
Yang, H. Kell	026	Columbia
Yoselevsky, Robert	190	St. Louis
Young, Thomas J	030	St. Joseph
Ziemianski, Matthew C	125	Kansas City

Orthopedic Surgery (ORS)

Abernathie, Dennis L	026	Columbia
Adams, Allen G	190	St. Louis
Adams, Mark A	026	Columbia
Adler, Federico	125	Kansas City
Albus, Thomas E	190	Bridgeton
Allen, William Corwin	026	Columbia
Anderson, David J	190	St. Louis
Anglen, Jeffrey O	026	Columbia
Ash, Charles J	082	Springfield
Aubuchon, Craig E	190	St. Louis
Baldwin, Richard, Jr.	190	St. Louis
Ball, David A	102	Joplin
Banton, Thomas J, Jr.	190	Florissant
Barnthouse, Cris D	125	Kansas City
Bassman, Donald R	190	St. Louis
Beall, McPherson S, Jr.	125	Kansas City
Beckett, William Wilson	026	Columbia
Belew, Mark	190	Florissant
Benson, William F	125	Kansas City
Bernhardt, Mark	125	Kansas City
Bieniek, Christopher M	150	Hannibal
Black, David L	102	Joplin
Blair, Vilray P, III	190	St. Louis
Bohn, William W	125	Kansas City
Bonar, Susan K	125	Kansas City
Boylan, Peter C	125	Kansas City
Brancato, Donald H	190	St. Louis
Brennan, Richard J	030	St. Joseph
Britt, Cornelius L	106	Crystal City
Brown, David W	082	Springfield
Browne, Jon E	125	Kansas City
Bruce, Robert P	125	Kansas City
Buchert, Peter K	026	Columbia
Burdge, Robert E	190	St. Louis
Burleigh, Bruce W	102	Joplin
Burns, Michael F	190	St. Louis
Burton, Curtis D	150	Hannibal
***Cameron, Roger W**	058	Jefferson City
Carroll, Danny K	214	Belton
Carter, Edwin E	190	St. Louis
Chalk, David E	074	Washington
Cho, Kyu S	190	St. Louis
Clarke, Michael S	082	Springfield
Clymer, David J	125	Kansas City
Cordell, Larry D	125	Kansas City
Couchman, Ryan W	190	St. Louis
Cunningham, R. Raymond	026	Columbia
Curnow, Richard B	050	Liberty
Darnell, Dale E	125	Kansas City
Davis, Leonard L	014	Mexico
DiFilippo, Emil A	189	St. Charles
Dillard, Erin M	082	Springfield
Doerr, Dale E	190	St. Louis
Downs, Daniel M	125	Kansas City
Drisko, Robert M, II	125	Kansas City
Dugan, Gerald F	125	Kansas City
Duncan, Douglas M	082	Springfield
Dusek, Dennis A	190	St. Louis
Ebelke, David K	125	N. Kansas City
Eckenrode, James F	026	Columbia
Edwards, Ryan K	178	Sedalia
***Ellefsen, Brian K**	102	Carthage
Eller, Gordon W	042	Cape Girardeau
Ellfeldt, Howard J	125	Kansas City
Ellsasser, James C	026	Rocheport
Emanuel, James P	190	St. Louis
Esch, John G	102	Joplin
Evans, Lawrence G, Jr.	190	St. Louis
***Farley, Gary W**	190	St. Louis
***Finch, Emil E**	198	Marshall
Fox, Thomas J	190	St. Louis
Frank, Gael R	125	N. Kansas City
Frevert, Larry F	125	Kansas City
Frewin, Paul R	082	Springfield
Frumson, Guy H	190	Florissant
Gaines, Robert W	026	Columbia
Gainor, Barry J	026	Columbia
Garner, James H	125	Kansas City
Gehrke, Jon C	026	Columbia
Gelberman, Richard H	190	St. Louis
Gilden, Jerome J	190	St. Louis
Glaser, Larry F	125	Cleveland
Gondring, William H	030	St. Joseph
Grant, William T	190	St. Louis
***Graven, Timothy G**	189	Troy
Gunter, Kevin G	178	Sedalia
Gurba, Danny M	125	Kansas City
Haas, Robert W	050	Liberty
Hamilton, Dennison R	002	Overland Park, KS
Hammond, D. Wade	190	St. Louis
Harmon, Ben C	082	Springfield
Harris, Hugh G	082	Springfield
Harris, Lanny W	125	Kansas City
Haupt, Herbert A	190	St. Louis
Havey, John	026	Columbia
Hernandez, Salvador R	190	St. Louis
Highland, Thomas R	026	Columbia
Hoffmann, Ronald E	190	St. Louis
Holand, Roy W	082	Springfield
Holder, Barrett K	190	St. Louis
Hollocher, Richard J	190	St. Louis
Holt, Benjamin T	026	Columbia
Humphreys, William	030	St. Joseph
***Hunter, Harlen C**	190	Chesterfield
Jackson, Roger P	050	Kansas City
Jarka, Dale E	125	Kansas City
Jeffries, Joel T	026	Columbia
Jelley, V. Carl	125	Blue Springs
Johnson, Glen E	190	St. Louis
Johnston, Richard	190	St. Louis
Jolly, Ben L	014	Mexico

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*Doctor of Osteopathy

ORTHOPEDIC SURGERY

Jones, Bruce N	Chesterfield	190
Jones, Lowry, Jr.	Kansas City	125
Jones, Robert P	Blue Springs	125
Joyce, Steven T	Kansas City	125
Kapp, William K, III	Bridgeton	190
Kenney, John D	St. Louis	190
Keohane, Mark	St. Charles	189
Kiburz, Douglas W	Sedalia	178
Kramer, Robert S	St. Louis	190
Krautmann, John J	Jefferson City	058
Kriegshauser, Lawrence A	St. Louis	190
Kuhlman, Robert E	St. Louis	190
Lander, Robert C	St Louis	190
Lange, David R	Bridgeton	190
Lehman, Richard C	St. Louis	190
Lents, Rickey L	Cape Girardeau	042
Leslie, James T	Jefferson City	058
Linsenmeyer, Charles M	St. Charles	189
Littlejohn, Robert T	N. Kansas City	050
Lord, Richard E	St. Louis	190
Luechtefeld, Frank	Florissant	190
Luther, George A	St. Louis	190
Mahnken, Robert F	Springfield	082
Mannis, Charles I	St Louis	190
Manske, Paul R	St. Louis	190
Marshall, Michael P	Kansas City	002
Marti, Larry B	Rolla	135
Martin, Daniel J, Jr.	St. Louis	190
Martin, Jeffrey W	Bridgeton	190
Matava, Matthew	St. Louis	190
Matthews, Thomas D	Washington	074
Maylack, Fallon H	Florissant	190
McAllister, John W, II	St. Peters	189
McClain, Thomas D	Springfield	082
McElroy, Glenn L	Columbia	026
McMillin, John N	Springfield	082
McMullin, Forbes A	St Louis	190
McMurray, Scott W	Springfield	082
McNamara, Gerald R	Kansas City	050
McQueary, Frederick G	Springfield	082
Mell, Roger L	Chesterfield	190
Merenda, Frank J	St. Louis	190
Merenda, James T	St. Louis	190
Merkel, Kurt D	St. Louis	190
Miller, Harry G	Clinton	086
Mirbaha, Mitchell M	St. Louis	190
Morris, Alan H	St. Louis	190
Morse, John P	Kennett	070
Nachtigal, Michael P	Springfield	082
Neighbor, Ernest H	Kansas City	125
Nogalski, Michael P	St. Louis	190
Olive, Paul M	Springfield	082
Otten, Joseph V	Bridgeton	190
***Page, Lawrence V**	Joplin	102
Parkins, George K	Kansas City	125
Parsons, Clyde W, III	Springfield	082
Pawsat, John E	Kansas City	125
Petkovich, Frank O	St. Louis	190
Phillips, John J	Florissant	190
Phillips, Thomas P	Kansas City	125
Piontek, Jerome G	Chesterfield	190
Piper, Terrence L	St. Peters	189
Pomphrey, Martin M, Jr.	St. Louis	190
Prostic, Edward J	Kansas City	125
Putnam, John L	Springfield	082
Raskas, David	St. Louis	002
Reeves, R. Bradley	Joplin	102
Rhoades, Charles E	Kansas City	125
Rich, Margaret M	St. Louis	190
Rispler, David T	Jefferson City	058
Ritter, R. August, III	Cape Girardeau	042
Ritter, Ray A, Jr.	Cape Girardeau	042
Rogers, David B	Springfield	082
Rose, Barry A	Kansas City	125
Roush, Randall D	Florissant	190
Russell, Garth S	Columbia	026
Ryan, Thomas J	Jefferson City	058
Samson, Barry L	St. Louis	190
Samuelson, Thomas S	Kansas City	125
Sanchez, Jon J	Springfield	082
Sandow, Theodore L	Kansas City	125
Satterlee, C. Craig	Kansas City	125
Schaberg, James E	St. Charles	189
Scherr, David D	Jefferson City	058
Schlafly, Bruce S	St. Louis	190
Schlafly, Edward F, Jr.	Chesterfield	190
Schmidt, Thomas L	Kansas City	125
Schoenecker, Perry L	St. Louis	190
Schroer, William C	Florissant	002
Schwarze, Daniel J	St. Louis	190
Scott, Andrew	Kansas City	125
Seagrave, Richard A	Springfield	082
Sedgwick, William G	St. Louis	190
Sertl, George O	St Louis	190
Shaeffer, James T	Springfield	082
Sheridan, John J	St Louis	190
Shitut, Ravindra V	St. Louis	190
Shively, Robert A	St. Louis	190
Sicat, Alfonso V	Warrensburg	110
Skimming, W. Lee	St. Louis	190
Smith, Bruce D	St. Joseph	030
***Smith, C. Daniel**	St. Joseph	030
Smith, Kenneth R	Bolivar	206
Smith, Patrick A	Columbia	026
Stavrides, Pete D	St. Louis	190
Stitt, Ronald W, Jr.	Kansas City	125
Stokes, Douglas L	St. Joseph	030
Strecker, William B	St. Louis	190
Strickland, James C	St. Louis	190
Strong, Alexandra J	Kansas City	125
Stronsky, David	St. Louis	190
Stuckmeyer, James A	Blue Springs	125
Sudekum, Joseph M	St. Louis	190
Sundstrom, Frank D	Springfield	082
Susi, Jesse G	St. Louis	190
Sutherland, Charles J	St. Louis	190
Swaim, Truett	Blue Springs	125
Swango, John S	Springfield	082
Takacs, Robert J	Kansas City	125
Tessier, John E	St. Louis	190
Thomas, Leslie D	N. Kansas City	050
Thorpe, William P	Cape Girardeau	042
Tillema, David A	Kansas City	125
Trecha, Randal R	Columbia	026
Trueblood, Michael C	Cape Girardeau	042
Tucker, Robert E	St. Louis	190
Turnbaugh, Thomas R	Jefferson City	058
Turner, Michael L	Poplar Bluff	034
Van Ry, Jacques S	Bridgeton	190
Veitch, John M	Joplin	102
Vierling, Stephen E	St. Louis	190
Vilmer, Charles E	N. Kansas City	050
Vilmer, Stephen E	N. Kansas City	050
Wagner, John R	St Louis	190
Wakeman, Newt, Jr.	Springfield	082
Walentynowicz, James E	St. Louis	190
Wayne, Sherwyn J	St. Louis	190
Weise, Marc W	St. Louis	190
Weltmer, John B, Jr.	St. Louis	190
Whitaker, James H	Kansas City	125
White, Newton B	St. Louis	190
Whiteside, Leo A	Bridgeton	190
Williams, Joseph	St. Louis	190
Wittgen, Edward M	St. Louis	190
Wolf, Marion L	Springfield	082
Woy, George H	N. Kansas City	050
Yost, John G, Jr.	Kansas City	125
Young, Eric E	Kansas City	125
Zehnder, Kenneth W	St. Louis	190
***Zipper, Ronald**	N. Kansas City	050

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*Doctor of Osteopathy

Other (OS)

Mongan, James J	125	Kansas City
Rotskoff, Kenneth S	190	St. Louis

Otolaryngology (OTO)

Ailor, Edgar I	026	Columbia
Allphin, Allan L	082	Springfield
Barnhill, Floyd R	082	Springfield
Bart, Gerald N	190	St. Louis
Benecke, James E, Jr.	190	St. Louis
Berkowitz, Wallace P	190	St. Louis
Bonacorsi, John	190	Bridgeton
***Bosley, Carl E**	034	Poplar Bluff
Boyd, James H	190	St. Louis
Branham, Gregory H	190	St. Louis
Brown, Rebecca L	082	Springfield
Burkey, Jordan W	082	Springfield
Burroughs, Nathan D	050	N. Kansas City
Campbell, Gregory S	026	Columbia
Christiansen, Sidney G	030	St. Joseph
***Coffman, Avon C**	125	Kansas City
Conoyer, J. Michael	189	St. Peters
Cook, Paul R	026	Columbia
Cotton, Thomas R	125	Kansas City
Craig, Robert D	002	St. Louis
Davis, Sheldon	190	Florissant
Davis, William E	026	Columbia
Denninghoff, James S	026	Columbia
Devine, Mark W	050	N. Kansas City
Dlabal, Luke J, Jr.	125	Independence
Donovan, Thomas J	190	St Louis
Druck, Norman S	190	Chesterfield
Ehrlich, Carl F	190	St. Louis
Eisenbeis, John F	190	St. Louis
Ellis, John C	125	Independence
Estrem, Scott A	026	Columbia
Felker, C. Edward, III	202	Sikeston
Freeman, Jerry C	125	Kansas City
Friedman, William H	190	St. Louis
Goebel, Joel A	190	St. Louis
Guastello, Joseph R	125	Kansas City
Guastello, Mario J	125	Kansas City
Hahn, Frederick W	125	Independence
Hantz, Oscar	190	Florissant
Herzog, Jacques A	190	Chesterfield
Hughes, Michael F	125	Kansas City
Ingram, Donald R	190	Festus
Ippensen, John H	082	Springfield
Jung, Christopher H	042	Cape Girardeau
Katsantonis, George	190	St. Louis
Kendall, Forrest H	125	Kansas City
King, Dana M, III	030	St. Joseph
Kirsch, Jeffrey P	190	St. Louis
Kletzker, George R	190	St. Louis
Knudson, Dennis R	026	Columbia
Krebs, Festus J, III	125	Kansas City
Kroeger, George B, Jr.	190	St. Louis
Lampros, William P	190	St. Louis
Levine, Laurence A	190	St. Charles
Lima, Jose A	190	St. Louis
Loynd, Robert C	190	St. Louis
Luetje, Charles M	125	Kansas City
Lyman, Edward H	190	St Louis
Mangum, William B	125	Independence
Marchiando, Albert W	074	Washington
Martin, Richard A	042	Cape Girardeau
Marty, David R	058	Jefferson City
Maslan, Mark J	125	Kansas City
Maves, Michael D	190	Alexandria, VA
McGonigle, Michael M	102	Joplin
McIntee, Rae A	002	Kansas City
***McIntire, Larry D**	102	Joplin
McKenzie, Randolph A	125	Kansas City
McKinney, John W	190	St. Louis
Mertz, Janet S	125	Kansas City
Moritz, Gerald	190	Bridgeton
Neely, J. Gail	190	St. Louis
Pavlovich, Andrew S	125	Independence
Phanijphand, Suwan	034	Poplar Bluff
Phipatanakul, Supote	190	St. Louis
Piccirillo, Jay F	190	St. Louis
Price, Richard B	125	Overland Park, KS
Reichert, Timothy J	190	St. Louis
Renner, Gregory J	026	Columbia
Ridenour, Brock D	190	St. Louis
Roberts, Perry T	042	Cape Girardeau
Robinett, Wade V	125	Kansas City
Rogers, Robert L	125	Kansas City
Roh, Lynn H	125	Kansas City
Saxon, Keith G	125	Liberty
Schrick, Richard E	190	St. Louis
Schroeder, Walter A, Jr.	042	Cape Girardeau
Seiden, Gerald D	125	Kansas City
Sessions, Donald G	190	St. Louis
Shagets, Frank W	102	Joplin
Singleton, Marvin A	102	Joplin
Smith, Courtland P, Jr.	070	Kennett
Smith, Peter G	190	St. Louis
Snow, Jon F	082	Springfield
Spake, R. Vanneman	125	Kansas City
Spector, Gershon	190	St. Louis
Stith, John A	190	St. Louis
Stroble, Mark	190	St. Louis
Templer, Jerry W	026	Columbia
Thawley, Stanley E	190	St. Louis
Thedinger, Bradley S	125	Kansas City
Thomas, Robert M	026	Columbia
Thornton, F. Parker, III	125	Kansas City
Tumanut, Benesto F	050	Gladstone
Varvares, Mark A	002	St. Louis
Viers, Wayne A	190	St Louis
Vighi, James R	189	St. Charles
Walls, Kelvin	125	Independence
Waxman, Joel E	082	Springfield
Wible, Jerry C	082	Springfield
Wild, Alan P.	190	Chesterfield
Willman, Martin L	189	St. Charles
Wolfe, James B	082	Springfield
Wurster, W. J.	125	Kansas City
Yates, Karen	042	Cape Girardeau
Zitsch, Robert P, III	026	Columbia

Pathology (PTH)

Allen, James H	190	St. Louis
Anderson, Douglas A	082	Springfield
Arthaud, J. B.	026	Columbia
Arthur, Gerald L	026	Columbia
Bari, Wagih A	190	St. Louis
Benson, Russell L	125	Kansas City
Blair, Olga M	190	St. Louis
Bollozos, George D	190	Chesterfield
Bourgeois, Curtis H	026	Columbia
Boyce, John M	178	Sedalia
Brangle, Robert W	190	St Louis
Breckenridge, Robert L	050	Kansas City
Bucher, William C	026	Columbia
Burch, Timothy K	125	Overland Park, KS
Callaway, Lawrence A	125	Kansas City
Carlson, John V	014	Mexico
Case, Mary E	190	St. Louis
Caughron, Michael R	125	Kansas City
Cento, Donald P	202	Sikeston
Charles, Elaine Z	190	St. Louis
Coffin, Cheryl M	190	Salt Lake City, UT
Costin, Jimmy L	034	Poplar Bluff
Craver, Jeffrey L	190	Bridgeton
Cummings, Kenneth C	125	Kansas City
Curry, Michael D	026	Columbia
Darkow, Grant V	026	Columbia

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*Doctor of Osteopathy

DeFeo, Theodore C	125	Kansas City
Dehner, Louis P	190	St. Louis
Dorzab, William E	125	Kansas City
Duensing, George F	082	Springfield
Dumadag, Virgilio P	190	St. Louis
Durr, Jon W	190	Florissant
Esther, John R	102	Joplin
Evans, George A	026	Columbia
Ferris, Charles W, Jr.	190	St. Louis
Fink, Roger L	082	Springfield
Fritzlen, Thomas J	125	Overland Park, KS
Galblum, Larry I	125	Kansas City
Gauthier, Charles P	125	Kansas City
Gerdes, John A	082	Springfield
Givler, Robert L	125	Kansas City
Hall, Stanley G	150	Hannibal
Hamel, Peter C	150	Hannibal
Henry, Lawrence D	058	Columbia
Henry, Mary M	125	Kansas City
Hopson, David K	190	St. Charles
Horn, Paul C	042	Cape Girardeau
Hurly, Michael P	102	Joplin
Ingram, Ellis A	026	Columbia
Johnson, Gareth R	125	Independence
Johnson, Gordon L	106	Festus
Johnson, Jonathan H	034	Poplar Bluff
Johnson, Steven M	190	St. Louis
Jones, Randall W	125	Independence
Kang, Juan	190	St. Louis
Keitges, Pierre W	125	Overland Park, KS
King, Gregory S	190	St. Louis
Kissane, John M	190	St. Louis
Kleopfer, Lynn L	026	Columbia
Kraus, Frederick T	190	St. Louis
Landgraf, James R	125	Independence
LaBach, James P	125	Overland Park, KS
Lewis, Noel R	082	Springfield
Lombardo, Joseph A	190	St. Louis
Marshall, Hal E	125	Kansas City
Martin, Scott A	190	Chesterfield
McCullough, James P	125	Overland Park, KS
McDonald, Margaret E	102	Joplin
McIntire, Timothy L	058	Jefferson City
McMeekin, Sheila P	125	Overland Park, KS
Millet, Ruth E	125	Kansas City
Morrison, R. Gideon	178	Sedalia
Mosby, Larry D	026	Columbia
Moya, Carlos E	030	St. Joseph
Mueller, John J	190	St. Louis
Ost, Mark D	125	Kansas City
Paez, Mauro A	190	St. Louis
Patrick, Roman L	190	St. Louis
Perez, Blanca M	190	St. Louis
Pintado, Susan O	102	Joplin
Pittman, David L	026	Columbia
Pittman, Gerald R	190	St. Louis
Poger, Marshall E	190	St. Louis
Prey, Marianne U	190	St. Louis
Racela, Luz S	125	Leawood, KS
Ramos, Richardo R	190	St. Louis
Rao, Sumati	190	St. Louis
Rawson, Perry G	074	Washington
Rollo, John L	190	St. Louis
Salvador, Antonio	190	St. Louis
Seitz, Elson F	125	Independence
Shah, Sheila	030	St. Joseph
Short, Charles D	190	St. Louis
Siegel, Carl D	125	Kansas City
Silliman, York E	030	St. Joseph
Slahorek, George J	135	Ft Leonard Wood
Smid, David M	082	Springfield
Somoza, Jose R	050	Kansas City
Spollen, Linda E	026	Columbia
Stahr, William D	042	Cape Girardeau
Sueper, Robert H	190	St. Louis
Talbott, Lawrence B	125	Kansas City
Tombridge, Thomas L	082	Springfield
Turgeon, Ronald P	190	St. Louis
Vergara, Gerardo G	125	Kansas City
Vilar, Ester G	190	St. Louis
Villanueva, Angela A	125	Overland Park, KS
Vo, Thuy-Lieu T	190	St. Louis
Wachter, Ronald M	082	Springfield
Wienke, Eugene C	190	St. Louis
Zacharias, Sara	026	Columbia

Pathology, Clinical (CLP)

Druet, Robert L	082	Springfield
Haake, Gregory K	082	Springfield
Meyer, John S	190	Chesterfield
Nomura, Roy M	190	St. Louis
Posey, Douglas H, Jr.	030	St. Joseph
Raborar, Arteso C	082	Springfield
Thal, Sanford M	190	St. Louis
Withrow, Donald	190	St. Louis

Pediatrics (PD)

Accardo, Pasquale J	190	St. Louis
Aceto, Thomas, Jr.	190	St. Louis
Adams, Susan E	190	St. Louis
Allen, Jerry H	074	Washington
Altemeier, William A, III	026	Columbia
Amjad, Mohammad T	190	St. Louis
Andrews, Elizabeth J	082	Springfield
Barker, Edward T	190	St Louis
Barnes, Richard E	150	Hannibal
Barter, Bruce	125	Kansas City
Bauer, Martin L	125	Prairie Village
Beesley, Kari	002	Kansas City
Belen, Marietta	106	Festus
Benoist, Walter F	190	Chesterfield
Berman, Paul M	190	St. Louis
Bernhardson, Paul D	026	Columbia
Birmingham, Jean E	190	St. Louis
Blanton, Jos C	202	Sikeston
Blim, R. Don	125	Kansas City
Bloomberg, Gordon R	190	Chesterfield
Bordy, Marvin D	125	Kansas City
Bost, Roger K	034	Poplar Bluff
Bouhasin, John D	190	St Louis
Bowers, James E	190	Kirkwood
Braddock, Stephen	026	Columbia
Brady, Teresa M	125	Raytown
Brehm, Martha A	102	Joplin
Britton, Loretta M	125	Kansas City
Bunge, Nancy J	014	Mexico
Burgdorf, Max H	190	Bridgeton
Burry, Virgil F	125	Blue Springs
Bussmann, Yvonne L	082	Springfield
Cantor, Harvey E	190	St. Louis
Carnahan, Charles E	026	Columbia
Casey, Eliot C	190	St Louis
Ceaser, Nancy H	082	Springfield
Charette, Richard P	125	Kansas City
Chauhan, Nazar C	034	Poplar Bluff
Chun, Chung S	125	Kansas City
Clever, Henry W	189	St. Charles
Clothier, Robert W	125	Independence
Cockerell, Charles F	125	Blue Springs
Cokingtin, Diana L	125	Kansas City
Cokingtin, Leovigildo C	125	Independence
Collins, Douglass D	082	Springfield
Conley, Brian S	058	Jefferson City
Cook, Katherine S	135	Rolla
Cygan, Ronald W	125	Kansas City
Dattel, F. Scott	002	Raytown
Davis, Carolyn T	125	Overland Park, KS
Dempsey, Maureen E	026	Columbia
DeCastro, Fernando J	138	Pilot Knob

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*Doctor of Osteopathy

DeSilva, Ananda	Hazelwood	190
Diehl, Elizabeth W	St. Louis	190
Diemer, Jean	Cape Girardeau	042
Dinkins, James A	Cape Girardeau	042
***Downs, Craig E**	Springfield	082
Duling, Gerald J	St. Charles	189
Edmonds, Robert W	Chesterfield	002
Espaillat, Jose A	Sikeston	202
Ewing, Lesley L	Kansas City	125
Farberman, Elliott	Florissant	190
Fernandez, Fernando	St. Joseph	030
Fitzmaurice, Laura S	Kansas City	125
Floyd, Marla J	Springfield	082
Flug, Eric J	St. Louis	190
Forgue, Donald R	Kansas City	125
Friedman, Ira J	Washington	074
Gassman, Ann A	Kansas City	125
Gauer, Robert J	Kansas City	050
Gellman, Elliot F	St Louis	190
Glines, Michael H	Arnold	190
Goldberg, Joseph P	Overland Park, KS	125
Goldkamp, John D	St. Charles	189
Goldstein, David E	Columbia	026
Goler, Michael R	Springfield	082
Goodman, Gary M	Chesterfield	190
Griesemer, Bernard A	Springfield	082
Groshong, Ted D	Columbia	026
Grunt, Jerome A	Kansas City	002
Guyer, Emily	Columbia	026
Hall, Robert T	Kansas City	125
Hamburg, Frederic L	Springfield	082
Hanks, Michael S	Springfield	082
Hansen, Thomas L	Independence	125
Harris, David J	Kansas City	125
Harris, Weldon L	Independence	125
Harrison, Thomas J, Jr.	St. Charles	189
Hartley, Robert D, II	Edmond, OK	190
Harwell, J. Larry	St. Louis	190
Hellerstein, Stanley	Kansas City	125
Hellweg, Raymond W	Florissant	190
Henry, Roy A	Springfield	082
Hoffman, Edward L	Kansas City	125
***Hoffman, James E**	Cape Girardeau	042
Holland, Robert D	Springfield	082
Holleman, David N	Kansas City	125
Holmes, Nancy E	St. Louis	190
Horan, John J, Jr.	St. Louis	190
Howard, Campbell P	Kansas City	125
Hunter, Leslie M	Ft Leonard Wood	135
Ip, Aidan W	St. Louis	190
Jackson, Mary Ann	Kansas City	125
James, Elizabeth J	Columbia	026
Jones, Robert R	Nevada	214
Kahn, Joseph A	St. Charles	189
Kanarek, Joseph	Kansas City	125
Keefe, David M	St. Charles	189
Kemp, Michele E	Chesterfield	190
Khan, Abdul G	Arnold	190
Khurana, Satish K	Lenexa, KS	125
Kilbride, Howard W	Kansas City	125
Knapp, Jane F	Kansas City	125
Knock, Henry L	St. Louis	190
Kosse, Karl E	St. Joseph	030
Kreusser, Katherine L	St. Louis	190
Krishna, Padma	Kansas City	125
Kronemer, Norton S	St. Louis	190
Lastra, Carlos R	Columbia	026
Latimer, Walter N	Gladstone	050
Lieb, Francis X	St. Louis	190
Limpiphiphatn, Ester P	Perryville	174
Mann, James K	Hannibal	150
McElroy, George L, III	Jefferson City	058
McKinney, Daniel C	Springfield	082
McNeal, Douglas M	Springfield	082
Mestres, Hugh M	St Louis	190
Meyer, John W	Springfield	082
Miller, Suzanne L	Grover	190
Mitra, Nirmal K	Kansas City	125
Monteleone, Patricia L	St. Louis	190
Morgan, Mary	St. Louis	190
Motier, Thomas H	St. Louis	190
Muraywid, Ahmad H	Mexico	014
Murphy, Timothy P	St. Joseph	030
Nash, Homer E, Jr.	St. Louis	190
Newman, Ray E	Kansas City	125
Newman, William R	Joplin	102
Nicholis, G. Ronald	Kansas City	125
Nile, David A	St. Louis	190
Nussbaum, Larry	Liberty	050
Olson, Gary S	Cape Girardeau	042
O'Neil, Jerome H, Jr.	St. Louis	190
Oppermann, Karen J	Independence	125
Otis, Stephanie A	St. Louis	002
Overend, Don S	Springfield	082
Palcheff, Chris L	Springfield	082
Peterson, Frederick D	St Louis	190
Phillips, Abraham M	St. Louis	190
Pitiyanuvath, Tasanaporn	Kansas City	125
Pittman, Susan	St Louis	190
Plax, Steven I	St Louis	190
Powell, Alan E	Independence	125
Recchia, Kimberlee C	Chesterfield	190
Reed, Timothy F	Sedalia	178
Rejent, Anthony J	St. Louis	190
Reyes, Lirio M	Springfield	082
Rice, Kathleen G	Springfield	082
Rising, Dean R	Springfield	082
Roberts, Charles C	Kansas City	125
Roberts, Phyllis G	St. Joseph	030
Robinson, David P	Columbia	026
Ross, William J	Bridgeton	190
Ryser, Carol A	Kansas City	125
Sakmar, Douglas A	St. Louis	190
Sammon, T. James	Springfield	082
Sato, Geo	Chesterfield	190
Sato, Richard W	Chesterfield	190
Schlansky, Howard J	St. Charles	189
Schmidt, Martin P	St. Louis	190
Sharma, Vidya	Kansas City	125
Sheehan, Michael B	Kansas City	125
Sherman, W. Gary	Chesterfield	190
Simmons, Connie D	Cape Girardeau	042
Simons, Paul S	St. Louis	190
Smith, Arnold L	Columbia	026
Smith, Katherine W	Kansas City	125
Snyder, Christopher H, Jr.	Springfield	082
Solanki, Nareshkumar J	Wentzville	190
Spewak, Robert D	St. Louis	190
Sponenberg, Don D	Springfield	082
Stiaszny, Louis K	Kansas City	125
Sultan, Tipu	Florissant	190
Suseela, Dasari	Kansas City	125
Suvan, R	Poplar Bluff	034
Tenorio, Genoveva	Albany	158
Thompson, F. Gregg	St. Joseph	030
Tillman, Mary A	St. Louis	190
Trimmer, Jeanne M	St. Louis	190
Triska, Roland A	St. Louis	190
Tschudin, Garland	St. Louis	190
Tsifutis, Argyrios A	St. Louis	190
Tungsiripat, Soros	Kennett	070
Umar, Ibrahim S	St. Peters	189
Vaughters, Frank M	Kansas City	125
Vietti, Teresa J	St. Louis	002
Walentik, Corinne	St Louis	190
Walker, Orville C	Independence	125
Warady, Bradley A	Kansas City	125
***Wasserman, Gary S**	Kansas City	125
Waxelman, Roger J	Ballwin	190
Weldon, Virginia V	St. Louis	190
Westerfeld, Roy A	St. Charles	189
Wicklund, Brian M	Kansas City	125

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*Doctor of Osteopathy

Williams, Kathleen M	Kansas City	125
*Wilson, James W	Springfield	082
Wimmer, Warren J	Florissant	190
Woods, Gerald M	Kansas City	125
Wool, Gerald	St. Louis	190
Zahn, Robert L	Springfield	082

Pediatric Allergy (PDA)

Cannon, Richard E	St. Charles	189
Corry, James M	St. Louis	190
Perez, Jeannie O	Bridgeton	190
Portnoy, Jay M	Kansas City	002
Schulman, Jeffrey I	St. Louis	190
Siegel, Charles	Gladstone	050

Pediatric Cardiology (PDC)

Canent, Ramon V	Kansas City	125
Gowdamarajan, Rengasamy	Kansas City	125
Hubbell, Marius M, Jr.	Kansas City	125

Pediatric Neurology (PDN)

Tenorio, Gene	Springfield	082

Pediatric Radiology (PDR)

Launius, Gregory D	St. Louis	190
Ritter, John L	Springfield	082
Roberts, Fred F	Kansas City	125

Pediatric Surgery (PDS)

Ashcraft, Keith W	Overland Park, KS	125
Bell, Martin J	St Louis	190
Cradock, Thomas V	St. Louis	190
Delgado, Eliana	St. Louis	002
Helikson, Mary A	Columbia	026
McKoy, Charlotte A	St. Louis	002
Murphy, John P	Overland Park, KS	125
Sharp, Ronald J	Overland Park, KS	125
Ternberg, Jessie L	St. Louis	190

Physical Medicine & Rehabilitation (PM)

Al-Shathir, Saad	Joplin	102
Behm, Laurie	Joplin	102
Clark, Jennifer L	Columbia	026
Conway, Robert R	Columbia	026
Del Rosari, John E	St. Louis	190
Gnatz, Steven	Columbia	026
Karges, Melvin D	Kansas City	125
Kelly, Charles R	Kansas City	125
Knakal, Roger C	Kansas City	002
Komes, Kevin D	Joplin	102
Lennard, Ted A	Springfield	082
Lieb, Thomas F	St. Louis	190
Lytle, Edwin L	St. Louis	190
Mauldin, Charles C	Springfield	082
Middleton, Mary J	St. Joseph	030
Mohsen, Aly M	Springfield	082
Pryor, Harold J	Kansas City	125
Randolph, Bernard C, Jr.	St. Louis	002
Rondinelli, Robert D	Kansas City	125
*Rupright, S. Jon	Columbia	058
Tetalman, Bruce I	St. Joseph	030
Wheeler, Eden	Independence	125
Wice, Martin B	St. Louis	190
*Woods, Brenda L	Jefferson City	058
Zarr, James S	Kansas City	125

Plastic Surgery (PS)

Barnthouse, Joseph R	Kansas City	125
Barone, Constance M	Columbia	026
Bennett, Danny L	Kansas City	125
Brennan, Daniel J	St. Louis	190
Cabbabe, Edmond B	St. Louis	190
Callegari, Paul R	St. Louis	002
Caplin, David A	St. Louis	190
Coin, Richard E	St. Louis	190
Copeland, Jeffrey G	St. Charles	189
Corwin, Kenneth D	St. Louis	190
Crandall, Richard E	Chesterfield	190
Croll, Gregory H	Columbia	026
Crow, Martin L	Kansas City	125
Danielsson, Ernst P	Springfield	082
DePriest, Michael D	St. Joseph	030
Domann, Darrel D	Springfield	082
Eades, Joseph W	Chesterfield	190
Ettelson, Charles D	Chesterfield	190
Feliciano, Wilfrido C	Maryland Hghts	190
Finley, John M	Joplin	102
Fortin, Don G	Kansas City	050
Francel, Thomas J	St. Louis	002
Garrison, Carla J	Springfield	082
Geraghty, Thomas E	Kansas City	125
German, David S	St. Louis	190
Geter, Rodney K	Springfield	082
Goldstein, Marcy A	St. Louis	002
Gutek, E. Philip	Kansas City	125
Halford, Richard M	St. Louis	190
Hall, Gary D	Mehlville	190
Hart, William G, Jr.	St. Louis	190
Heimburger, Richard A	Osage Beach	058
Higgs, Philip E	St. Louis	190
Huffaker, William H	Chesterfield	190
Iacobucci, John J	St. Louis	002
Johnson, Charles J	St. Louis	190
Jones, Timothy R	St. Louis	190
Kaplan, Michael F	Columbia	026
Khouri, Roger K	St. Louis	190
Kofkoff, Richard L	Bridgeton	190
Koo, Michele D	St. Louis	190
Kraemer, Bruce A	St. Louis	190
Lakusiewicz, Ronald J	Poplar Bluff	034
Lamb, Jerome P	Blue Springs	125
Lund, Herluf G, Jr.	Chesterfield	190
MacKinnon, Susan E	St. Louis	190
Marsh, Jeffrey L	St. Louis	190
McClung, Mark W	Kansas City	125
McGuire, Patricia A	St. Louis	190
Meystrik, Rosellen S	Springfield	082
Mischnick, Carol R	Chesterfield	190
Mossie, Raymond D	Kansas City	050
O'Connell, Timothy	St. Louis	190
Onken, Henry D	St Louis	190
Paletta, Christian E	St. Louis	190
Payne, Meredith C	Chesterfield	190
Price, Carl I	Springfield	082
Puckett, Charles L	Columbia	026
Reddy, R. Ramachandra	Cape Girardeau	042
Ribaudo, J. Michael	St. Louis	190
Rinehart, Gregory C	St. Louis	190
Rottler, Paul D	St. Louis	190
Ruehl, Albert F	St Louis	190
Santin, Antonio	Kansas City	002
Scheu, James H	St. Peters	190
Seaberg, John J, III	Columbia	026
Sherrod, Duane W	Joplin	102
Stevens, Sheridan	Independence	125
Strain, Herb A	Kansas City	125
Stromberg, Brent V	St. Louis	190
Thompson, Frederick E	Liberty	050
Tobin, Gregory A	Cape Girardeau	042
Wall, Norman R	Springfield	082
Walton, Patrick J	Kansas City	125

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*Doctor of Osteopathy

Webb, Harry E	Kansas City	125
Webber, William B	Ithaca, NY	190
White, Bruce I	St. Louis	190
Winsky, Arlen D	Springfield	082
Young, Robert A	Chesterfield	190
Young, Vernon L	St. Louis	190

Psychiatry (P)

Ahmad, Aqeeb	St. Louis	190
Aiken, Richard C	Washington	074
Ajans, Zaki A	Mexico	014
Aleksander, Bernardo G	El Paso, TX	190
Allison, James B	Springfield	082
Anderson, Thomas R	Columbia	026
Baird, Keim L	St. Charles	189
Balcer, Charlotte M	Jefferson City	058
Banez, Colita R	St. Louis	190
Bartulica, Nicholas	St. Joseph	030
Batterson, James R, Jr.	Kansas City	125
Beitman, Bernard D	Columbia	026
Berland, David I	Chesterfield	190
Biggs, John	St Louis	190
Black, Kevin J	St. Louis	190
Bright, James E	Springfield	082
Bronson, Shael S	St Louis	190
Brown, Keith A	Waukesha, WI	190
Cabanas, Justo J	Shawnee Mission, KS	125
Calabria, Rafael	Nevada	214
Calhoun, Joshua W	St. Louis	190
Callahan, Jos D	St. Louis	190
Callaway, Jo J	Kansas City	125
Canale, John P	St. Charles	189
Choi, Sei Youn	St. Charles	189
Cole, Sherman W	Kansas City	125
Corvalan, Juan C	St. Louis	190
Crane, John B	Washington	074
Croughan, Jack L	St. Louis	190
Crumpacker, Margaret	St. Louis	190
Curry, D. Troy	St. Louis	190
Davis, Mary A	St. Louis	190
Day, Chester L	Prairie Village	125
Dewald, Paul A	St Louis	190
Dewein, Edward G	St Louis	190
Dick, Earl	Columbia	026
Dick, M. Marga	Ashland	026
Dos Santo, Enrique	Columbia	026
Dowell, George H	St Louis	190
Downey, Janice L	Kansas City	002
Edmisten, Jack	Nevada	125
Efstathianos, Kimon	Belleville, IL	190
Eppright, Thomas D	Columbia	026
Farzana, Farida	St. Louis	190
Finn, Murray E	St Louis	190
Frazier, Robert E	Columbia	026
Freeman, Mark E	St. Louis	190
Gagliardo, Joseph	St. Louis	190
Garcia, Eduardo L	St. Louis	190
Gaskin, Fred W	St. Louis	190
Gavankar, Sharad S	Joplin	102
Glazzard, Charles D	Springfield	082
Glenn, Theodore J	Cape Girardeau	042
Gonzalez, Alicia D	St. Louis	190
Grossberg, George T	St. Louis	190
Guze, Samuel B	St. Louis	190
Hagen, Duane Q	St. Louis	190
Hartnett, Anna E	St. Louis	190
Hartnett, Thomas D	St Louis	190
Hay, Donald P	St. Louis	190
Heimburger, Elizabeth M	Columbia	026
Hicks, Frederick G	St. Louis	190
Hicks, Robert S	St. Louis	190
***Hogan, Patricia E**	St. Joseph	030
Holemon, R. Eugene	St. Louis	190
Hornstra, Robijn K	Kansas City	125
Houghton, Howard L	Kansas City	125
Hudgens, Richard W	St. Louis	190
Hughes, Derek	Columbia	026
Jones, Georgia A	St. Louis	190
Jones, Laird E	Springfield	082
Kamath, K.P.S.	Cape Girardeau	042
Katf, Nicola Y	N. Kansas City	050
Khan, Khawla B	St. Louis	002
Khojasteh, Saaid	St. Louis	002
Kitchen, Alice D	St. Louis	190
Kitchin, Winston H	St. Louis	190
Kleinschmidt, Donn C	St. Louis	190
Knowles, R. Raymond	Webster Groves	190
Krojanker, David N	St. Louis	190
Krojanker, Rolf J	St Louis	190
Kuhn, Lawrence F	Bridgeton	190
Kulak, Gary	St. Louis	190
Kulick, Eric M	Prairie Village	125
Kulkarni, Satish R	Town & Country	189
Lamb, Wanda	St. Louis	190
Lamberti, Jos W	Columbia	026
LeFevre, Philip J	Springfield	082
Lindgren, Carleton J	Independence	125
Lipschitz, Ervin	St Louis	190
Liss, Jay L	St Louis	190
Lucas, Thomas G	St. Louis	190
Lyskowski, John C	Jefferson City	058
Malmberg, Virgil L	Chesterfield	190
Mangunta, Vijaya K	Sedalia	178
McAfee, Gordon	Springfield	082
McKinney, Joe K	St. Louis	190
Mendez, Maria A	Springfield	082
Meyer, Jay L	St. Louis	190
Meyers, Robert W	St. Louis	190
Milgram, Byron A	Kansas City	125
Miller, Jule P	St Louis	190
Miller, Pamela S	Rolla	026
Mittleman, Frederick S	Prairie Village	125
Monroe, C. Dean	Columbia	026
Moran, Thomas M	St Louis	190
Moritz, K. Lynne	St. Louis	190
Munro, John S	Kansas City	125
Nakra, Rashmi R	St. Louis	190
Navato, Jose R	Independence	125
Neal, James G	Springfield	082
Nieuwenhuizen, Maarten	Columbia	026
Nowotny, Thomas J	St. Louis	190
Ohlms, David L	St Louis	190
Othmer, Ekkehard	Kansas City	050
Packman, Paul	St Louis	190
Parks, Joseph J	Jefferson City	026
Parwatikar, Sadashiv D	St. Louis	190
Peterson, Stephen E	Kansas City	125
Pew, Becky A	St. Louis	190
Pickens, Andrew T	St. Louis	190
Pompushko, Rosalie	Kansas City	125
Post, Stephen L	St Louis	190
Pribor, Elizabeth F	Chesterfield	190
Pro, John D	Kansas City	125
Quiason, Arturo G	Independence	125
Rankin, Diane	St. Louis	190
Ratnam, Dasari V	Kansas City	125
Reddy, Agara S	Columbia	026
Renner, Julie A	University City	002
Reynolds, Robert B, Sr.	Chesterfield	190
Richardson, Thomas F	St Louis	190
Rizzo, Adolfo E	St. Charles	190
Robinson, Gordon H	St. Louis	190
Rosenthal, Randall	St. Louis	190
Russell, Guy R	Carl Junction	102
Rutherford, James L	St. Louis	190
Ryall, Jo-Ellyn M	St. Louis	190
Sabet, Abdollah A	Ballwin	190
Saghir, Marcel T	St. Louis	190
Schmitz, John M	Kansas City	125
Schwarz, Luis H	St. Louis	190
Segraves, Steven D	Kansas City	125

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Sheffner, Paul W	St. Louis	190
Shen, Winston W	St. Louis	190
Shopper, Moisy	St. Louis	190
Silwance, Lily A	Leawood, KS	125
Simmons, Donald D	Kansas City	125
Simon, Nathan M	St. Louis	190
***Simpson, Floyd D**	Springfield	082
Sitzman, Everette T	Kansas City	125
Slaughter, James R	Columbia	026
Snow, Emasue	Springfield	082
Soltys, Stephen M	Columbia	026
Soorya, Narendir T	St. Louis	190
Stewart, Harry A	Shawnee Mission, KS	125
Stillings, Wayne A	St. Louis	190
Suarez-Solar, Pedro L	St. Charles	189
Thomas, Maria D	Springfield	082
Tilzer, Seth	Florissant	190
True, James D	Kansas City	050
Trugly, Edith S	St. Louis	190
Valera, Salvador S	St. Joseph	030
Vandivort, Paul M, Jr.	St. Louis	190
Vera, Enrique	Ft. Myers, FL	125
Viamontes, Jorge A	St Louis	190
Vickar, Garry M	Florissant	190
Wade, Larry A	Springfield	082
***Williams, Robert J**	St. Joseph	030
Wilson, Roy E	Springfield	082
Wolff, Harold D	St. Louis	190
Yasin, Fazle M	St. Louis	190
Yates, John M	Jefferson City	058
Yoo, Chong-Sup	Festus	106

Public Health (PH)

Biery, Richard M	Kansas City	125

Pulmonary Disease (PUD)

Beller, Thomas A	Kansas City	125
Bittle, Bradley K	Cape Girardeau	042
Bower, James S	Kansas City	125
Brabson, John H	Springfield	082
Brischetto, Michael J	St. Louis	190
Brook, Charles J	Kansas City	125
Devins, George S	Kansas City	125
DiTirro, Frank J	Kansas City	125
Durie, Robert H	Kansas City	125
Goheen, John R	Kansas City	125
Grimm, Mark E	Springfield	082
Hargis, James L	Springfield	082
Harrison, Garth F	Kansas City	125
Heinz, George	Springfield	082
Hof, David G	Kansas City	125
Khan, Khalid I	Cape Girardeau	042
King, John V, Jr.	Bridgeton	190
Lampton, Lawrence M	Columbia	026
Lerner, Scott A	Kansas City	125
Mahmoud, Said F	Kansas City	125
Pingleton, William W	Shawnee Mission, KS	050
Piquette, Craig A	Omaha, NE	190
Reddy, Anchala N	West Plains	206
Scacewater, Rick	Joplin	102
Schlozman, Daniel L	Kansas City	125
Siler, Thomas M	St. Charles	189
Spence, Thomas H, Jr.	St. Louis	190
***Thomas, Norvin E**	Mexico	014
Wiant, James R	St. Louis	190
Wood, John A	Chesterfield	190

Radiation Oncology (RO)

Baglan, Robert J	St. Louis	190
Bedwinek, John M	St. Charles	190
Bruso, Charles E	Kansas City	125
Bryer, Mark P	Columbia	026
Butler, David F	Chesterfield	190
Cozad, Scott C	Kansas City	125
Devineni, V. Ray	Bridgeton	190
Garcia, Delia M	St. Louis	190
Hanes, Lily A	Golden Eagle, IL	190
Lee, Fransiska A	St. Louis	190
Lin, Hsiu-San	St. Louis	190
Massey, Vickie	Kansas City	125
McDonough, Michael	Fenton	002
Mill, William B, Jr.	St. Louis	190
Miller, Joseph P	Cape Girardeau	042
Morrison, Richard A	Independence	125
Myers, Duane E	Joplin	102
Pacheco, Jose M	Springfield	082
Rapke, Stephanie L	Columbia	026
Robinow, Jay S	Kansas City	125
Roy, Tapankumar S	St. Louis	190
Simpson, Joseph R	St. Louis	190
Smalley, Stephen R	Kansas City	125
Sutphen, Eric J	St. Louis	190
Walz, Bruce J	St. Louis	190
Zivnuska, Frederick R	St. Louis	190

Radiation Therapy (TR)

Abadir, Rushdy	Columbia	026
Alcancia, Elpidio Y	Springfield	082
Boles, Murray	Columbia	026
Chaudhury, Triptesh K	Port Arthur, TX	002
Cohen, Joel N	Springfield	082
Murrell, H. Jerry	Columbia	026
Paradelo, Jorge C	Kansas City	125
Rogers, Joseph Drewry	Springfield	082
Throne, Ben J	Kansas City	125
Tio, Liep T	West Plains	206
Westgate, Steven J	Columbia	026

Radiology (R)

Abodeely, Daniel A	St. Louis	190
Al-Aly, Robert M	Ballwin	190
Albritton, Michael A	Springfield	082
Anderson, D. Claire	St. Louis	190
Archer, Carol R	St. Louis	002
Augustin, Cesar	St. Louis	190
Bardsley, John L	St. Louis	190
***Bartow, John H**	St. Joseph	030
Baskurt, Mehmet V	Poplar Bluff	034
Baula, Armindo G	St. Louis	190
Berni, Anthony A	St Louis	190
Blackwell, Charles W	Columbia	026
Burr, Donald C	Nashville, IL	190
Busse, Paul P	St. Louis	190
Campbell, William S, Jr.	Cape Girardeau	042
Carls, Garry L	Imperial	190
Clouse, John W	Springfield	082
Cohen, Edward	St. Louis	190
Colbert, Robert S	Sikeston	202
Cook, Marvin	St Louis	190
Corder, Patricia G	St. Louis	190
Courter, Larry P	Osage Beach	058
Crotty, John P	St. Louis	190
Dehner, Jonathan D	St. Louis	190
DeMotte, Jeanne M	Richmond	118
Diemer, David P	St. Louis	190
Diemer, Peter A	St. Louis	190
***Ditzel, Douglas W**	Joplin	102
Dixon, G. David	Kansas City	125
***Dykstra, John S**	Kansas City	050

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Egan, Thomas F St Louis	190
Elwing, Terry J Columbia	026
Ely, Norman B Springfield	082
Farkas, James R Sedalia	178
Francisco, Dominic S St. Louis	190
Gerdes, K. Eric Springfield	082
Gilula, Louis A St. Louis	190
Goodman, Douglas E Springfield	082
Gregston, J. Leon Springfield	082
Gubin, Barry A Kansas City	125
Gujarati, Subhash B Poplar Bluff	034
Gustafson, Jon E Lee's Summit	125
Habert, Edward R Clarkson Valley	190
Hassien, Joel D Hannibal	150
Hawkins, Calvin D Springfield	082
Hesker, Albert E Chesterfield	190
Higgins, Michael D Cape Girardeau	042
Hoskins, R. Bruce Kansas City	125
Jablonski, Raymond C St. Louis	190
Jamroz, Greg A Washington	074
Judd, Jeffrey B St. Louis	190
Kays, Kenneth M Osage Beach	046
Kester, Nathan L Springfield	082
Kim, Stanley W St. Louis	190
Kotner, Lawrence M, Jr. St. Louis	190
Krahn, Henry C Springfield	082
Krain, Samuel St. Louis	190
Kunin, Jeffrey R Kansas City	125
Kunz, Stephen R Overland Park, KS	125
LacKamp, Robert J St. Joseph	030
Lambie, Rodger W Kansas City	125
Lang, John J St Louis	190
Leary, Daniel J St. Louis	190
Lenzenhuber, Karl J Washington	074
Link, Alexander J St. Louis	190
Litzow, Peter L St. Louis	190
Logie, Macdonald B St. Louis	190
***Lovern, Royce E** Washington	074
MacDonald, Robert R, Jr. St. Louis	190
MacNaughton, Robert A, II Liberty	050
Mais, Thomas E Shawnee Mission, KS	125
McCown, Allan H St. Louis	190
Miller, Geoffrey W St. Louis	190
Moolsintong, Pornchai St. Louis	190
Nemec, Edward S St. Louis	190
Nepute, James A St. Louis	190
Niemeyer, John H St. Louis	190
O'Brien, Edward J, Jr. St Louis	190
Orsay, Paul K Chesterfield	190
Pal, Michelle L Kansas City	125
Paskar, Larry D Chesterfield	190
Pepper, Edward G St Louis	190
Perez, Carlos A St. Louis	190
***Pfautsch, Mark L** Cape Girardeau	042
Phelan, Christie B Kansas City	125
Prater, Kimberley A Springfield	082
Rabushka, Sanford E St. Louis	190
Rall, Kenneth L Independence	026
Reh, Thomas E St Louis	190
Rezvani, Laghaieh Sikeston	202
***Ricci, Robert G** Leawood, KS	050
Roehrs, David H Sedalia	178
Rozen, Jay I Kansas City	125
Savci, Hasan D St. Louis	190
Schmidt, Dennis A St Louis	190
Schulz, Richard C St Louis	190
Shields, John B St. Louis	190
Shore, Jeffrey L Joplin	102
Shyken, Herman St. Louis	190
Smeltzer, Frederick M Lake Ozark	120
Smith, Robert W Chesterfield	190
Solomon, Steven L St. Louis	190
Spalding, Donald G St. Louis	190
Srivisal, Somnuk St. Louis	190
Staab, Gerald E Kansas City	125
Tailor, Chandrakant C St. Louis	190
Tellerman, Barbara J Columbia	026
Thierauf, Charles G St. Louis	190
Thompson, Robert F Kansas City	125
Trevor, Richard P Kansas City	125
Verde, Julian N St. Louis	190
Vijungco, Jose G St. Louis	190
***Weiss, Randy B** Joplin	102
Weyman, Philip J Chesterfield	190
Williams, Craig W Cape Girardeau	042
Zeigler, Jos M St. Louis	190

Reproductive Endocrinology (REN)

Lyles, Rodney Overland Park, KS	125
Starks, Gregory C Kansas City	125
Zamah, Nezaam M Kansas City	125

Rheumatology (RHU)

Armstrong, Stephen D Springfield	082
Braun, Alan L Jefferson City	058
***Bronson, Wendell D** St. Joseph	030
Fischbein, Lewis C St. Louis	190
Ghosh, Sanjay Washington	074
Huston, Kent A Kansas City	125
Kincaid, William L St. Louis	190
Schwartz, Howard R Springfield	082
Taylor, Philip W Cape Girardeau	042

Thoracic Surgery (TS)

Bailey, Steven C Cape Girardeau	042
Coordes, Cordie C Chesterfield	190
Cox, James L St. Louis	190
Early, Gerald L St. Joseph	030
Eisenberg, Steven B Chesterfield	190
Garrett, Ted E St. Louis	190
Graham, Joseph E St. Louis	190
Gurucharri, Vincent P Columbia	026
Huddleston, Charles B St. Louis	190
Judd, Donald R St. Louis	190
Kaiser, George C St. Louis	190
Killen, Duncan A Kansas City	125
Kouchoukos, Nicholas T St. Louis	190
Kraeger, Russell R St Louis	190
Leidenfrost, Ronald D Chesterfield	190
Marbarger, John P, Jr. St. Louis	190
McDonald, Herbert L Bolivar	066
Murphy, J. Peter, Jr. St. Louis	190
Murphy, Michael C St. Louis	190
Naunheim, Keith S St. Louis	190
O'Sullivan, Daniel F St Louis	190
Padula, Richard T Kansas City	125
Patterson, Alec St. Louis	190
Peigh, Pamela S St. Louis	190
Pennington, D. Glenn St. Louis	190
Piehler, Jeffrey M Kansas City	125
Pinkerton, Joe A, Jr. Kansas City	125
Ramsey, J. Darryl Cape Girardeau	042
Reed, William A Kansas City	125
Reinhardt, J. Robert R Kansas City	125
Roberts, Shauna R St. Joseph	030
Roper, Charles L St. Louis	190
Ruess, Robert W Cape Girardeau	042
Russell, James L Kansas City	125
Sasser, William F St. Louis	190
Sauer, Paul E Springfield	082
Schechter, Marc J Cape Girardeau	042
Shaw, Richard C St Louis	190
Sheverini, James A Scranton, PA	125
Stephenson, Hugh E Columbia	026
Sundaresan, Sudhir St. Louis	002
Sundt, Thoralf M St. Louis	002
Van Way, Charles W, III Kansas City	125
Wathanacharoen, Suchint Kansas City	125
Willman, Vallee L St. Louis	190

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Urology (U)

Abercrombie, Keith J	Kansas City	125
Ahmann, Thomas M	Mexico	014
Albani, Frank J	Liberty	050
Aldridge, George A	Poplar Bluff	034
Apte, Sunil M	Washington	074
Austin, George M	Blue Springs	125
Avallone, Anthony N	Springfield	082
Biber, Robert J	Independence	125
Bigg, Steven W	St. Louis	190
Blades, Ross D	Springfield	082
Blath, Richard A	St. Louis	190
Bock, David B	Kansas City	125
Brehm, G. Scott	Joplin	102
Brodkey, Mark J	Kansas City	125
Bucy, James G	St Louis	002
Bussmann, Donald W, Jr.	Springfield	082
Carpenter, James L	St. Charles	189
Chehval, Micheal J	St Louis	190
Cockrell, Steven N	Hannibal	150
Davis, Bradley E	Overland Park, KS	125
DeGuerre, Ronald K	Chesterfield	190
Deleste, Carlos J	Festus	106
Denes, Bela	Bridgeton	190
Dresner, Steven M	Columbia	026
Elkins, Robert L	Kansas City	125
Ellis, Harry L	Springfield	082
Emeran, George J	St. Louis	190
Falzone, John J	Jefferson City	058
Farber, Barry S	Springfield	082
Fathman, Anthony E	Chesterfield	190
Feit, Robert M	St. Louis	190
Felker, J. Russell	Cape Girardeau	042
Follis, Howard W	Springfield	082
Foster, R. Steve	Sedalia	178
Freiden, Floyd J	Kansas City	125
Frogge, Jim D	Joplin	102
Fuleihan, Farid M	St. Louis	190
Gelstein, Laurence D	St. Louis	190
Gonzales, Jose H	Perryville	174
***Hall, John P**	Cape Girardeau	042
Hardy, David A	St. Louis	190
Harrison, Winston E	Columbia	026
Hawatmeh, Abraham S	St. Louis	190
Herrick, Thomas B	Kansas City	050
Houttuin, Erik	Washington	106
Itoku, Kendall	Chesterfield	190
Johnson, Jeffrey R	Springfield	082
Johnson, Robert D	Springfield	082
Jones, Jace S	Springfield	082
Klein, Saul J	St. Louis	190
Koonce, John P	Jefferson City	058
Kozminski, Mike	St. Joseph	030
Kurtz, Karl J	Kansas City	125
Leifer, Gary	Kansas City	125
Lentz, Harold C, Jr.	Independence	125
Lierz, Mark F	St. Joseph	030
Lovinggood, J. Perry	Bridgeton	190
Mackey, Richard L	St. Louis	002
Madduri, Sivaprasad D	Poplar Bluff	034
Mahboubi, Aziz O	Sikeston	202
Maloney, Robert M	St. Louis	190
Marcus, Michael D	St. Louis	190
McCanse, Lynn R	N. Kansas City	050
McCarthy, John F	St. Louis	002
Milne, Jay L	Springfield	082
Mitchell, John D	Kansas City	125
Moeller, Randall J	St. Joseph	030
Morgan, Willy J	E. St. Louis, IL	190
Myers, George H	Kansas City	125
Nash, Steven D	Kansas City	125
Neuman, Neal	St. Louis	190
Nicolai, Charles H	St. Louis	190
Parres, Jeffrey A	St. Louis	190
Partamian, Krikor O	St. Joseph	030
Pearson, Thomas C	Springfield	082
Perinetti, Enrique P	St. Louis	190
Reddy, Abbiah N	Poplar Bluff	034
Remis, Robert E	St. Joseph	030
Richards, William H	St. Joseph	030
Ross, Gilbert, Jr.	Columbia	026
Saha, Nitai C	St. Louis	190
***Scanlon, Robert C, II**	Springfield	082
Scheibe, Robert G	St. Louis	190
Schermer, Jerrold A	Columbia	026
Schmidt, Jerome H	Jefferson City	058
Scully, Thomas F	St. Louis	190
Severance, Michael S	Jefferson City	058
Shah, Jitendra P	St. Louis	190
Shah, Mahendra S	West Plains	206
Shands, Courtney, III	St. Louis	190
Stanley, Brad K	Independence	002
Sunshine, Herbert	St Louis	190
Teague, J. Lynn	Columbia	026
Terry, James F	Springfield	082
Thompson, Paul D	Cape Girardeau	042
Torrence, Ralph J	Chesterfield	190
Walters, Frederick P	St. Louis	190
Wan, Shaw P	Rolla	135
Weaver-Osterholtz, Dana J	Columbia	026
Webb, James P	Springfield	082
Weide, Allan R	N. Kansas City	050
Weinberger, Phillip C	Warrensburg	110
Weinstein, Stephen H	Columbia	026
Wilson, William T	Independence	125
Wise, Morris F	Kansas City	125

Vascular Surgery (VS)

Auer, Arthur I	St Louis	190
Barbee, Charles W	Columbia	026
Del Sant, Peter B	Columbia	026
Fogartie, James E, Jr.	Kansas City	050
Higgins, Edward F, Jr.	Kansas City	125
Hurley, Joseph J	St. Louis	190
Jacobs, Donald L	St. Louis	002
Nichols, W. Kirt	Columbia	026
Ostrow, Bridget F	Cape Girardeau	042
Schaefer, Stephen A	Marshall	198
Silver, Donald	Columbia	026
Stark, Karl R	Kansas City	125
Vogel, Curt M	Columbia	026
Walker, Howard S	St. Louis	190

138th
Annual Meeting of the Missouri State Medical Association
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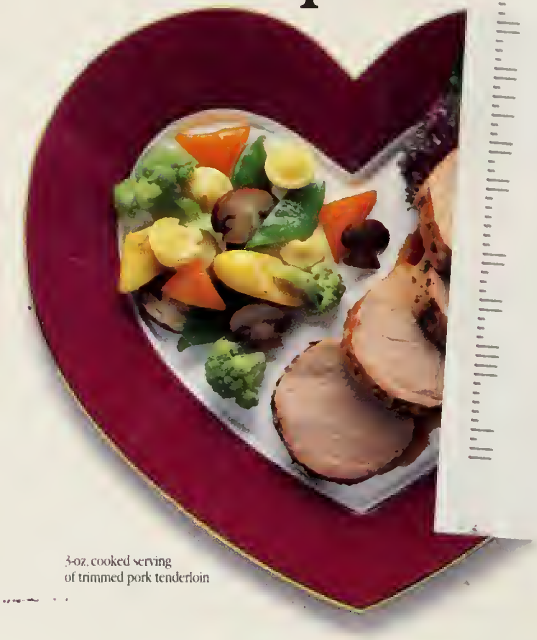

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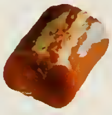

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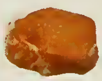

Top Loin
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1. US Dept of Agriculture. *Composition of Foods: Pork Products,* 1992. Agricultural handbook 8-10.
2. US Dept of Agriculture. *Composition of Foods: Poultry Products,* 1979. Agricultural handbook 8-5.

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Women in Medicine

MSMA Leaders discuss the challenges of being women physicians.

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $60.00. Annual subscription for members is included in the annual membership dues. Single copies are $8.00 and the per copy cost of the annual August Directory is $40.00.

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Cover Story

Women in Medicine Month: An Interview with MSMA Physicians 584
Lizabeth Starnes, MSMA Communications

Editor's Desk

Hormones and Highways: A dangerous mixture for teenage drivers 561
J. Regan Thomas, MD, Editor

President's Page

The Answer is, "NO! Chess For Fun" 564
Frederick Hahn, MD, MSMA President

AMA Council on Long Range Planning

Reinventing the House of Medicine: The Study of the Federation 566
George M. Bohigian, MD

Otolaryngology Quiz #7 569
Timothy M. Herr, MD and Gregory J. Renner, MD

Practice Management

Tax-Exempt Integrated Delivery Systems: Part 2, Stark I and Stark II - *Paul L. Vogel, CPA, JD and Helen M. Cripps, Attorney at Law* 572

Perspective

The AMA Wants Physicians' Views on Private Health Care Plans, Including Managed Care - *Arthur Gale, MD* 574

Medical Legal Issue of the Month

Can Missouri Health Care Providers Be Held Liable Product Under Srict Liability Law? - *Clark H. Cole, JD* 581

MPCRF

Retrospective Analysis of the Utilization of Right-Sided Cardiac Catheterization in Association with Left-Sided Cardiac Catheterization in Patients with Coronary Artery Disease 588
Gary J. Fortune DO, MPH, E. Andrew Ballas, MD, PhD, Brad Hegemann, MA, Russell C. LaFerney, BS, BA, MHA, and Theresa Luebbering, Helen J. Neikirk, MA, and Rhonda Weathers, LPN

Scientific Section

Post Tonsillectomy Hemorrhage: A Ten-year Retrospective Study 592
Walter A. Schroeder, Jr., DO, MD, FACS

Are Serum Levels of Vancomycin Useful in The First Week of Therapy? 596
E. Goldstein, MD, W. R. Bartholomew, PhD, M. K. Vickers, RPh, and T. Parr, PharmD

Letters to the Editor 562
Alliance Message 567
CME Calendar 602
Classified Listings 604

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Hormones and Highways: A dangerous mixture for teenage drivers

J. Regan Thomas, MD, Editor

I have reached the stage with my teenage children where in spite of my best efforts, they overshadow all my attempts at athleticism. They run faster, jump higher, and generally leave me gasping for breath on the court, the track, or the mountain side. I am definitely second string material on video games or the foosball table at our neighborhood pizza parlor. Indeed, any of those eye-hand coordination skill activities put me on the family B-team. So why can't they drive better?

Actually my kids have an unblemished driving record to date, but statistically teenage drivers do not fair well. In fact, when it comes to drivers under the age of 18, and especially for 16 year olds, all your innate parental fears are justified. The Insurance Institute for Highway Safety in a syndicated report by the *Seattle Times'* Carey Quan Geleruter provides some attention grabbing information for parents of teenage drivers. The leading cause of death among teens is from car wrecks. It states more than a third of all deaths of 16 through 18 year olds are from automobile crashes. The 16 year olds in their "rookie" driving year are at greatest risk. At age 16, the risk of a car crash is three times greater than just two years later at age 18. The risk for 16 year olds is seven times greater than for 25 year olds. The Insurance Institute figures do surprisingly point out that with 16 year olds the problem is not related to alcohol. In this age group only 5% of fatal crashes involve intoxicated drivers. Incidentally that figure is 48% for drivers 20 to 50 years old. An obvious standard not to be emulated.

Instead, these crashes seem to be more related to inexperience and immaturity (not to imply that the drinking-driving habits of many adults represent a mature decision process). The Institute researchers studying teen drivers found that it takes a long time to learn what to do and how to predict danger on the road. Younger teens as a group, seem to need more time to develop the maturity to make responsible decisions behind the wheel. At age 16, the common crash scenario involves a single vehicle, off-road accident (44%). The car runs off the road, overturns, or hits an object like a tree or utility pole. As compared with older drivers, fatal crashes with teens are much more likely to include three or more others in the car. Peer pressure to make poor judgements while driving happens to nearly all kids.

We can remember with a little effort what it was like to be a teenager. Our kids are no worse than we were at that age. The reality is that often teens simply are exposed to all of the worst hazards related to responsible driving. They are more likely to be driving smaller, older, maybe even "clunker" vehicles. They strive to be out at the highest risk time period, weekend nights. They have lower rates of seat belt use, higher rates of speed, and are likely to have other teen passengers with them. They are not bad kids - they are just like we were at that age. Regardless of how safely they drive with their parents, when they are out on their own it is a different situation. Friday night, friends in the car, the radio or CD playing ... well you remember! Everyone of that age is slower to perceive danger and more susceptible to peer influence. Some intentionally and deliberately seek excitement and thrills through high speed driving; dangerous combinations.

Continued on page 562

Letter to the Editor

SURVIVAL OF THE FITTEST

Physician Self-Deselection in the Managed Care Environment Resulting From Failure to Adopt Successful Coping Stratagems and Adapt Professional Behavior Patterns to the New Milieu.

Throughout the epoch preceding the last decade of the twentieth century, physicians were well adapted to their niche; they committed themselves to learning medical science, often enduring long hours, stress, and competition with minimal financial compensation, until they had at last passed their board exams and could start building a practice, caring for their patients. They could do this with utter confidence; almost all adequately trained physicians were able to build practices, over which they had total control, which brought satisfaction to themselves and their patients. Medical and Osteopathic students knew this: if they sacrificed in the beginning they would be predictably rewarded in the end. The personalities, the emotional needs of students destined to be physicians, have required this certitude; once they had completed their training they never again had to rethink or fight for their place in the system.

Then, during the distraction of the Clinton health care debate, in the 1990s, managed care emerged on the scene and disconnected physicians' rewards from their training; physicians abruptly lost access to their patients, in short, their independence. Physicians were (and are) disoriented, like deer in the headlights of a car. Other species in the health care environment, optometrists, podiatrists, chiropractors, psychologists and social workers, to name a few, had never enjoyed the physicians' assured outcome. Like Avis, they were number two; they had to work much harder at securing rewards after their much less rigorous training. They were forced to adopt coping skills, to band together, to collectively petition and lobby for their rewards. In short, they became tougher and more successful. Physicians remained vulnerable in this milieu; they had never had to acquire this particular set of coping skills, didn't know how to and didn't want to. To this day they persist in competing with each other like antlered stags locked in combat, unaware of the guns of the hunter.

In order to survive, physicians must adapt to the new environment. They must break the pattern of apathy and false security. They must recognize the threat to their survival. They absolutely must band together as never before, to confront the managed care enemy with a united voice, with all of their energy, and all of their intellectual and financial power.

Physicians, do not retreat in apathy and despair. Fight for your rights! Your patients expect you to do it for them. You must do it for them! You must also do this for yourselves! If you do not, you will soon be as extinct as the dinosaurs!

William J. Crowley, Jr., MD
Columbia, Missouri

EDITOR'S DESK, Continued from page 561

The problem is documented. The solution is less clear. The Insurance Institute for Highway Safety suggests a "graduated license" for driving. The plan would start teen drivers with an initial license which prohibit teen passengers and night driving, and require a parent or older experienced driver be in the car. As the teenager progresses through a period of driving which is accident-free and without traffic violation, they could gain an increasingly more privileged license and finally a full license. The Institute points out that the U.S. is one of the few developed countries in the world that gives full licenses at age 16.

How about driver's education? Unfortunately, it appears that while driver's education can teach driving skills and fundamentals, it doesn't seem to improve the safety record. Again, it's teen attitudes and judgement calls rather than physical driving skills that cause crashes. Human nature is sometimes hard to over come. Regardless of our age, sometimes it is hard to protect us from ourselves. MoMed

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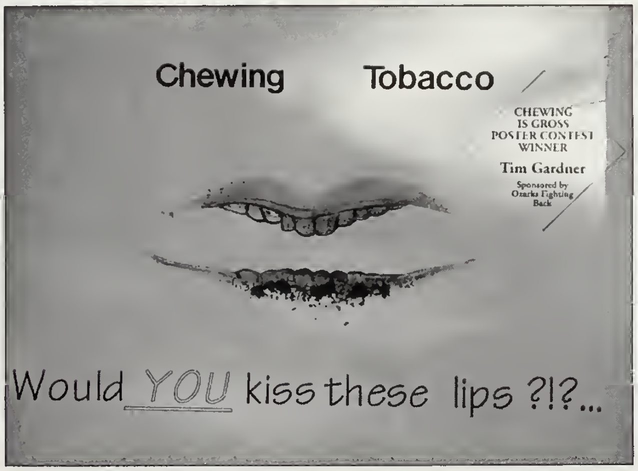
I enjoyed your article, "Spitballs and Bubbles." I totally agree that teenagers do not respond to warnings of health issues; they feel they are as bulletproof as I guess we all did at that age. They do respond to social issues however. The last two years the Greene County Medical Society and Ozarks Fighting Back (antidrug organization) have joined forces to organize a city-wide middle school and high school poster contest ridiculing smoking (last year) and spit tobacco (this year). The winning posters were selected by the students themselves and will be duplicated and then displayed in physicians' offices and placed in schools for the fall semester.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CHEWING IS GROSS POSTER CONTEST WINNER
Tim Gardner
Sponsored by Ozarks Fighting Back
Would YOU kiss these lips ?!?...

Ninety percent of all new smokers are children under age 18 and, although state statutes and most local ordinances prohibit the sale of tobacco to minors, the law is seldom, if ever, enforced. The MSMA endorsed the bill, sponsored by Representative Craig Hosmer, last session that would have licensed retailers of tobacco products; license fees would have been earmarked for enforcement of the existing statute. The bill unfortunately died due to vigorous opposition by the tobacco industry.

Our poster contest this year was funded by a grant from ASSIST, which is a project of the Missouri Department of Health in conjunction with the American Cancer Society designed to help decrease use in America. I have enclosed pictures of a few of our winning posters.

Sincerely,
James R. Blaine, MD, ***President-Elect, Greene County Medical Society***

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The Answer is, "NO! Chess For Fun"

Frederick Hahn, MD, MSMA President

I recently found myself an observer looking down on a pair of men at a chess board. As the players initiated the game and promptly proceeded a battle of strategy and wit, I reviewed my understanding of the potential in each of the chess pieces.

Progressing through the chess pieces, I found they paralleled my changing potential from the beginning of my practice in 1970 to today.

Leaving my chief residency position and moving out into the world of private practice, I felt like a young entrepreneur with my practice options wide open.

As I revisit that period, I was the King and Queen on the chess board. I could move in any direction and I could move as many spaces as I wished.

Around 1973, fee-for-service insurance was very responsive to both patient and physician needs. Then a "freeze" placed on Medicare charges. When this was lifted a few years later, new restrictions had been placed. One had to commit to either participating or not participating in Medicare. The game was played with a new set of rules.

At this point I still felt good about my potential. Perhaps best described as a Rook. I could move as far as I wished but only in perpendicular directions on the playing field. I could see as many patients as I wished and still control my production by how hard I wished to work. Nearly every patient who wished to see me could do so. My chief marketing tool was the recommendation of pleased patients.

In the mid-1980s my freedoms were further downgraded. Health maintenance organization arrived in our metropolitan area. I had to apply to participate. If I didn't, my patients could not see me. Beyond the necessity of being accepted (managed care's option), I was also obliged to accept managed care's reimbursement schedule.

My position now resembled that of a Bishop. I could move but I had to move in devious (diagonal) directions. However, good credentials allowed me into just about every HMO I sought to join (the reimbursement in some was so low that it was not wise to join).

All sorts of devious games were encountered which were aimed at wrenching away one's control of his/her practice. The fee schedules became increasingly wacky. HCFA sought administrative reason to the nonsensical Medicare fee schedules. All services were reevaluated with the establishment of a RBRVS (Resource Based Relative Value Scale).

If I had a patient at this point who was on Medicare and clearly could not afford the co-pay, I could not forgive that difference, as this constituted fraud and could lead to my loss of license to practice.

I now recognize myself as a Knight. With my practice even more convoluted, I must go two steps in one direction and one step to the right or left, or one step in a perpendicular direction and two to the left or right.

Today, managed care is right in our collective faces with movement toward full capitation. The acceptance of a fee per patient per month is not a method of my choosing but one which is about to be forced upon me. I am a commodity considered to be in excess and I am encouraged to believe this. Unless I request acceptance of a position with this or that managed care organization, I will be totally eliminated from the profession in which I have labored so hard and long to become proficient.

For me to survive, it becomes apparent that I must vie for ever longer lists of patients (panels) and I will be most effective economically if I do nothing for any of these patients.

If I do more for my patients than my peers, I will be culled out and dropped from the provider list. The thespians who promote these scenarios speak of "Quality Assurance"; translated to economic language, this means "Bottom Line."

We were once professional in the grandest of professions. Today, we are rapidly becoming assembly line workers, blue collar workers - Pawns on the chess board if you will.

What shall we do? What can we do?

I see two options. My first choice would be to overcome the forces which are trying to divide and conquer us at every juncture; overcome the forces which are separating us from the best interests of our patients, overcome the forces separating us from our peers, and overcome the forces that suck off an obscene percentage of the health care dollar with no intent toward enhancement of services provided in the process.

To accomplish this, it appears to me that our only inclusive mechanisms are the components of the Federation; our county, state and national medical societies.

The second choice is more sobering but historically has become the only tool through which those reduced to coolies have been able to strike back. This I am sorry to say is through unionization. What a sorry way to achieve a checkmate.

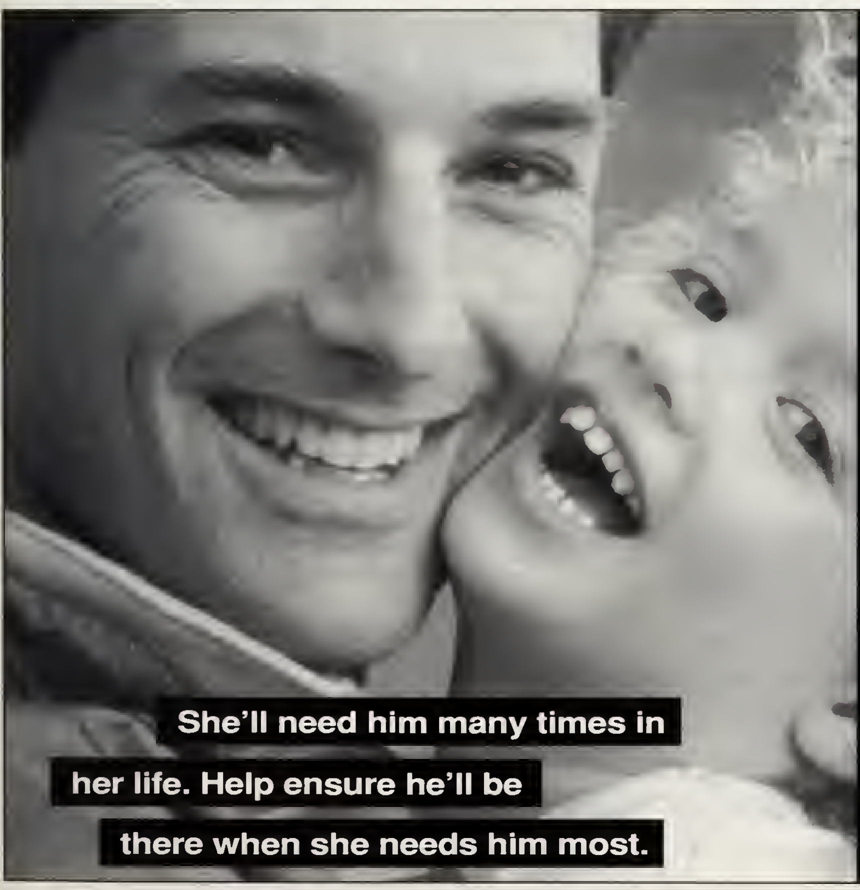
As the old joke asks; "Do you play chess for money?"

The answer of course; "No, chess for fun."

Once I did play the health care game with the promise of a return commensurate with my professional training, achieved skills and acquired judgment. Beyond my altruistic goals, I had the right to be a successful small business person or even an entrepreneur.

Today, I counsel the young people who are hopeful for a career in medicine, "Be sure your purpose in medicine is directed almost exclusively toward the rewards of learning and serving."

Unless we in the profession rally soon, we will be participating in a career "Chess for Fun." MoMed


She'll need him many times in
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Patient Profile:

James R. Douglas

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Occupation: Insurance broker
Marital Status: Married
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Reinventing the House of Medicine
The Study of the Federation

George M. Bohigian, MD

Early in 1992, the AMA's Council on Long Range Planning suggested reconfiguration of the Federation (AMA, State, County and specialty societies) to promote effective advocacy, better fiscal stability, more accurate representation, and improved communications with all physicians. The study of the Federation is organized medicine's effort to reinvent the house of medicine.

The Consortium includes nearly 200 physicians and medical executives nominated by state and county medical societies as well as representatives from the AMA and special interest groups. Missouri's participants are George M. Bohigian, MD, St. Louis, representing the Missouri State Medical Association, J. Harold Morris, Jr. MD, Independence, representing the American College of Physicians, and Robert Graham, MD, Kansas City, representing the American Academy of Family Physicians. The group has met three times in Chicago and plans to meet twice more during the two year project.

This study is a focused voluntary effort to examine ways in which the Federation can better serve the needs of physicians and help them serve their patients into the 21st century. Consortium members are studying responses to the changing health care environment, increased diversity, physician population, limited resources and the overriding need for purpose and action.

The focus group is using current technology to come to a "consensus" opinion. Questions pertaining to various aspects of organized medicine are presented on a theater-size screen. Each participant, using an electronic keyboard, responds using a 1 to 5 grading scale indicating disagreement or agreement. These answers are instantaneously correlated statistically by age, geographic location, gender, organization, MD or non-MD, etc. These broad points of the consensus are then used as the basis for a specific proposal.

The Consortium has identified the following five elements which would define a new Federation of Medicine.

- ☐ Formalization of the new Federation within the frame work of the AMA: The AMA is the logical element to serve as the framework for a new Federation of Medicine, but the AMA will have to change in some ways to fulfill that role successfully.
- ☐ The establishment of a mechanism (tentatively called the Federation Coordinating Committee) which would serve as a transitional agent to facilitate the development of a new Federation of Medicine.
- ☐ Representational changes which would support the concept that the mechanisms of all elements of organized medicine should reflect the diversity of physicians' professional lives.
- ☐ Collaborative efforts providing such services as physicians electronic bulletin board, physicians purchasing service and practice support services.
- ☐ Participatory enhancements: a new, non-governance organizational element tentatively called "Topic Interest Groups."

During the remaining meetings, the Consortium members will consider the following issues:

1. Specific changes in structure and governing of the AMA to serve as the framework for a new Federation of Medicine.
2. Representation to physicians based on practice arrangement and demographic categories.

The consortium participants used electronic keypads for instant computation of opinions at the workshop.

3. Methods of apportioning delegates to the organizations and bodies represented in the AMA House of Delegates.

4. Specific responsibilities and roles of various organizations.

Further reports on the redefinition of the House of Medicine and its mission will be developed in the near future and will be presented to all aspects of medicine. As a wise man once said, "Times change and we change with them." The time to change has come.

What will physicians want and need in the year 2000? Participants in the Consortium have determined the following wants and needs of physicians in the year 2000:

1. Greater public trust and credibility as well as an improved image as patient advocates.

2. Involvement in defining quality care, practice parameters, and appropriate standards of care.

3. Effective political representation focused on the future, rather than protection of the past.

4. Preparation for the changing practice environment.

The author would like to acknowledge William E. Madigan, executive director of the Michigan State Medical Society and Chris Bohigian for their assistance with this article.

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Otolaryngology Quiz #7

by Timothy M. Herr, MD and Gregory J. Renner, MD
Division of Otolaryngology, University of Missouri - Columbia

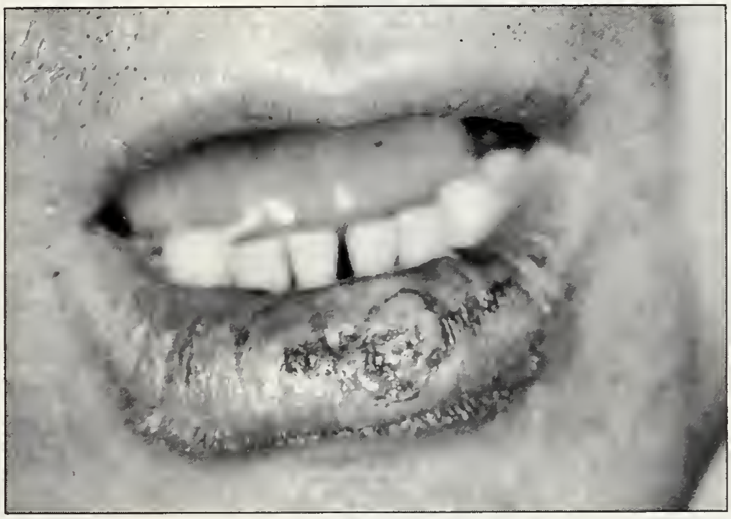

Figure 1

A 58-year-old white male farmer presents with a shallow, crusting lesion of the vermillion surface of the lower lip. This has been present for approximately nine months and has gradually increased to its present size. The lesion is not tender, but does exhibit some induration. The patient has worked most of his life as a farmer. He has a 30 pack-year history of smoking and occasional use of alcohol (see Fig 1).

Which is the correct diagnosis for the lip lesion shown?

a. actinic cheilitis
b. syphilitic chancre
c. herpes labialis
d. squamous cell carcinoma
e. keratoacanthoma

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER:
d. squamous cell carcinoma

Squamous cell carcinoma (SCC) of the lip occurs predominantly in white males, age 40-60 years old. The incidence in this country has been reported as approximately 1.8 per 100,000, but this varies with region.[1] By convention, only those malignant tumors arising from the vermillion surface are considered "lip" cancers. Those arising from the cutaneous surface are considered to be "skin" cancers, and those from the mucosal surface are "oral" cancers.[1,2]

SCC of the lip is most commonly seen on the lower lip (88-98%), but can also be found on the upper lip (2-7%) and the commissure (1%).[1,3-6] Lesions typically present as non-healing ulcerations or as exophytic growths and tend to enlarge slowly. With progression, they can invade into the lip musculature, or involve neural and bony structures. SCC of the lip can metastasize, usually first presenting in the submandibular and submental lymph nodes. Tumors of the upper lip and commissure may also metastasize to the parotid nodes.

A variety of factors have been associated with the development of lip cancer, especially heavy, cumulative ultraviolet light exposure. Others include fair complexion, immunosuppression, tobacco and/or alcohol abuse, and chronic local infections, such as papilloma or Herpes simplex.[1]

Management should begin with a diagnostic biopsy. The principal treatment modalities are surgical excision or radiation therapy. Radiotherapy can take the form of external beam, implantation, or both. These modalities can generally produce good therapeutic and cosmetic results, especially in small lesions. Surgery, however, continues to be the most common form of treatment. It is rapid, offers detailed pathologic examination of the resected specimen, offers a good rate of cure, and can often be done with good cosmetic and functional results. Mohs micrographic resection is an alternative form of surgical resection which is becoming more widely employed. Combined modality treatment (surgery and RT) may be necessary in advanced cases. Patients need to be followed carefully, for cervical metastases may present as late as five years after successful treatment of the primary tumor.

Actinic cheilitis is a vermilion lesion resulting from excessive ultraviolet light injury and is marked by superficial scaling and ulceration. This is considered premalignant and should be treated with excision or surface destruction. Herpes labialis presents as painful vesicles which rupture spontaneously and form crusts. Episodes are self-limited, lasting 7-10 days. A chancre is the hallmark lesion of a primary syphilis infection. This appears as a red-brown, nontender ulceration, which is also self-limited. A keratoacanthoma is a well-circumscribed, exophytic growth which has a central crater, filled with keratinaceous debris. These tend to arise rapidly and may later spontaneously involute. These are considered benign lesions, however, it can be difficult to satisfactorily distinguish keratoacanthoma from SCC, and it is felt that the two may be related.

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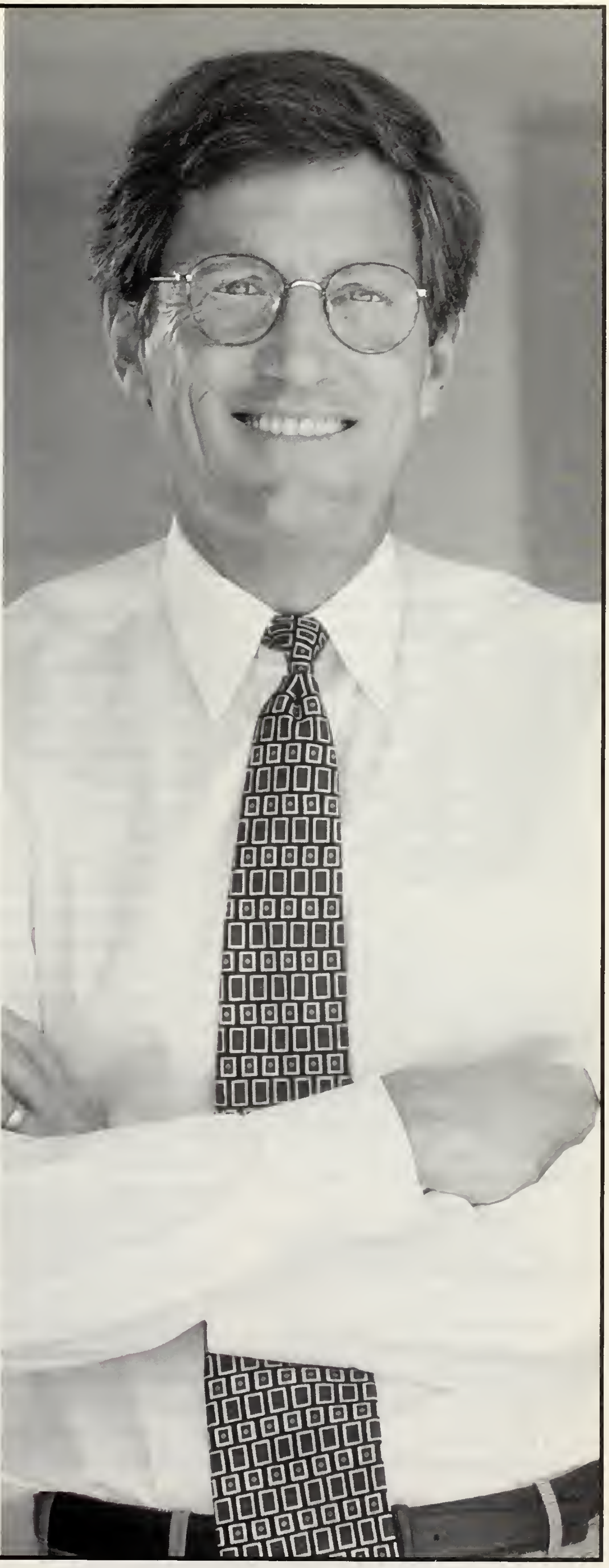

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Tax-Exempt Integrated Delivery Systems: PART 2, Stark I and Stark II

Paul L. Vogel, CPA, JD and Helen M. Cripps, Attorney at Law

As mentioned in Part I of this article, there are several areas of Health Care Regulation which must be considered in any sale of a physician's practice. This Part 2 discusses the implications of the Limitations on Physician Self-Referrals, better known as Stark I and Stark II, named after Representative Stark who originally introduced the Ethics in Patient Referrals Act legislation in 1989. Stark I essentially prohibited any individual or entity from furnishing a service to an individual if the individual's referring physician, (or an immediate family member thereof) had a financial relationship with the entity, and if the service which was rendered was reimbursable under Medicare. Stark I only applied to clinical laboratory services which were reimbursable under Medicare.

Stark II, which is far more reaching, became effective January 1, 1995. It applies to "designated health services." These ten new health services categories include:

- Physical Therapy services;
- Occupational Therapy services;
- Radiology or other radiology diagnostic services;
- Radiation therapy services and supplies;
- Durable medical equipment and supplies;
- Parenteral and enteral nutrients, equipment and supplies;
- Prosthetics, orthotics and prosthetic devises and supplies;
- Home Health services
- Outpatient prescription drugs;
- Inpatient and outpatient hospital services.

No regulations have been promulgated to date with respect to Stark II, so there remain many unanswered questions and uncertainty in this area. In general, however, the statute provides that, unless a specific exception is available, if a physician (or an immediate family member of the physician) has a financial relationship with an entity, then the physician may not make a referral to the entity for the furnishing of designated health services for which payment may be made under Medicare and Medicaid.

The financial relationship includes an ownership or investment interest or a compensation arrangement between the physician (or family member) and the entity, unless such ownership or investment interest or the compensation arrangement falls within one of the exceptions set out in the statute.

As in the Anti-Abuse Anti-Kickback Laws discussed in Part 1, the objective is to fall within one of the exceptions. In the Integrated Delivery System, the most important exceptions include the Group Practice Exception; the Rural Provider Exception; the Employment Exception; the Personal Service Arrangements Exception; the Physician Recruitment Exception; and Rental Office Space and Equipment Exception.

The specific requirements of each of these exceptions is beyond the scope of this article. Each physician or entity should consult their own legal counsel to determine the applicability of a particular exception. In general though, exceptions related to both ownership and compensation arrangements include:

- Physicians' services when a physician refers a member of the same legitimate group practice;
- Certain in-office ancillary services furnished by solo practitioners and group practices; or
- Services furnished by certain organizations with prepaid plans.

Exceptions related only to ownership and/or investment interests include:

- Ownership in certain publicly traded securities and mutual funds;
- Designated Health Services furnished by a rural provider; or
- Designated Health Services provided by a hospital if the referring physician can perform

services at the hospital and the ownership or investment interest is in the whole hospital, and not in a subdivision of the hospital.

Exceptions related to compensation arrangements include:

- Payments made for the rental of office space or equipment;
- Payments made to a physician (or immediate family member) who has a bona fide employment relationship with an entity;
- Payments made by a hospital to recruit a physician;
- Certain payments resulting from a group practice's arrangements with a hospital when designated health services are provided by the group; or
- Payments by a physician to an entity for items and services.

In addition, payments which may be made to a physician which are not related to the physician providing any designated health services are exempt. This may include payments made to a physician for services rendered in some administrative capacity, such as serving as a department head or medical director. Isolated payments to a physician may also be exempt from the compensation arrangement prohibition under certain conditions.

In contrast to the Anti-Kickback laws, there is no requirement of any improper intent in the Stark II regulations. Intent to violate the law is irrelevant. Any misunderstandings as to whether an exception exists, or even as to when the law applies may constitute a violation of Stark II.

The penalty for failing to comply with the Stark II regulations is a denial of the claims submitted for payment. In addition, if any person receives an amount for services billed in violation of the law, that person must make a refund of the amount collected. If a person fails to make a refund or if a person presents or causes to be presented a claim to Medicare or bill to any individual, third party payer, or other entity for any designated health service which the person knows or should know was furnished as the result of a prohibited referral, then such person is subject to a civil money penalty up to a maximum of $15,000 per service. Schemes designed to circumvent these rules are illegal and subject to a maximum penalty of $100,000 per scheme.

Physicians selling their practices should also consider the impact of the sale on their Medicare and Medicaid billing procedures. In most cases, the sale of a physician's entire practice will not implicate the prohibitions against assignment and reassignment, but it is still a matter which must be reviewed.

Another area of concern in the formation of a tax-exempt Foundation and purchase of physician practices is the implication of the Antitrust laws. Mergers and other business combinations which affect the market place by lessening competition or creating a monopoly are prohibited by Section 7 of the Clayton Antitrust Act. In determining whether or not a proposed merger will substantially lessen competition or tend to create a monopoly, it is important to be able to define the particular services involved and the market place which will be affected by the proposed merger. This requires identifying the medical services affected by the proposed merger, and a determination of other types of medical providers located in the relevant marketplace who can provide the same types of services. It also requires a determination of the relevant geographical market from which the merging practices would attract patients, and the area a payor would consider relevant in terms of competing providers. Full discussion of the antitrust factors involved in a potential purchase and sale is outside the scope of this article, but it is an area of the law which physicians and purchasing entities should not overlook in deciding whether or not to sell (or purchase) a physician practice.

Conclusion

The sale of a practice to a tax-exempt organization can have long-lasting effects on the selling physicians. Parts 1 and 2 of this article only scratch the surface of the issues involved and are merely intended to provide physicians with a basic level of understanding with which to formulate questions about the issues which must be considered and resolved prior to consummating any such sale.

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The Authors

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The AMA Wants Physicians' Views on Private Health Care Plans, Including Managed Care

By Arthur Gale, MD

At its recent annual meeting in Chicago, the AMA tried to develop a cohesive policy on managed care. This is a difficult task. On the one hand, the AMA wants to include those members who work for managed care organizations. On the other hand, it wants to continue its support of members who favor patients' freedom to choose between traditional fee-for-service plans, medical savings accounts, HMOs, and other options. As a result, the AMA is undergoing an identity crisis. The Hospital Medical Staff Section, the largest and most influential section of the AMA, has changed its name to the Organized Staff Section in an attempt to be more inclusive and to attract more physicians.

The AMA has developed a number of responses to managed care.

- Direct Contracting: Direct contracting with employers would eliminate the insurance company "middle man." Successful examples of direct contracting are John Deere and the Caterpillar companies. Direct contracting has worked best in medium-sized cities with one or two dominant employers. Direct contracting with employers may have potential for the future. For a copy of the intriguing and interesting Board of Trustees' Report #27 on direct contracting with employers, please call or write the MSMA.

- Development of Physician-Sponsored Networks: Physician-sponsored networks range from loosely organized IPAs to physician-run insurance companies. Some state medical associations like California are in the process of developing actual insurance companies.

- Insertion of the Point-of-Service (POS) Options in All Managed Care Plans: Proponents see POS as granting freedom of choice of physicians to patients in managed care. Many observers, including myself, think that the importance of POS for freedom of choice is overblown. Studies have shown that ultimately very few employees are willing to use the POS option because of the added expense and hassle, even if the additional cost is small. The managed care companies use POS as a marketing tool, touting it as a benefit allowing patients to choose their own physicians. They know full well that enrollees seldom use POS.

- Another AMA approach to managed care is through regulation. In our over-regulated society, this approach has not been too popular among lawmakers, special interest groups or, for that matter, the general public. But this antipathy to regulation will eventually pass, as the public becomes more aware of some of the negative aspects of managed care.

The most important regulation sponsored by the AMA is the well-known Patient Protection Act. If the experience in the states is any guideline, it faces rough sledding in Congress. In Missouri, most physicians are aware that the bill was bottled up in the Insurance Committee by state representatives who either work for or are sympathetic to the insurance industry. In Texas, the bill apparently passed both Houses only to be vetoed by Governor George Bush. It is difficult for most doctors to understand and accept that the insurance interests and their corporate sponsors will go all out to defeat a law which ensures that all Americans receive high quality health care.

The other major regulatory trust of the AMA is anti-trust relief which appears to be stymied at the present time.

◆ Another approach is to survey physicians on the quality of care delivered by HMOs and managed care entities. At the MSMA and AMA annual meetings, resolutions were introduced requesting that the AMA survey physicians' attitudes on the quality of care in managed care. Both resolutions were defeated, in part because some doctors believe that such a survey would be anecdotal and not objective, and in part because of cost factors.

In 1988, a survey of the AMA found that one-third of the doctors sampled thought that patients were harmed by delays or non-treatment under managed care. In 1993, the St. Louis Metropolitan Medical Society (SLMMS) conducted a survey on for-profit gatekeeper HMOs. There were over 500 responses to a survey sent to 2,500 physicians. The results are listed in Table 1.

TABLE 1

Question	Yes	No	No Opinion
I participate in at least one managed care organization (either HMO, IPA or PPO).	82%	15%	14%
I like practicing in local gatekeeper-type HMOs.	9%	68%	22%
I believe patients get good, quality care in gatekeeper-IPA type HMOs.	20%	58%	22%
I believe IPA gatekeeper type HMOs cut medical costs.	29%	49%	22%
I believe gatekeeper type HMOs at times affects my professional judgment.	55%	27%	18%

These results show conclusively that physicians think that the quality of care is adversely affected in for-profit gatekeeper HMOs.

Presently, the AMA is collecting data on physicians' experiences with all private sector health plans including managed care. This is not intended to be a scientific, statistically valid study. Some readers may have already read an editorial in *AMA News* (6/25/95) which outlines the goals of this project. The AMA is attempting to collect data on just about everything that has to do with private sector health plans that physicians feel would affect the practice of quality medical care. Some examples include, I quote:

- ❑ Health plan decision making involving treatment and utilization review;
- ❑ Current practice in reimbursement and capitation rates;
- ❑ Due process and appeal rights, including those governing physicians deselection from networks;
- ❑ Contract "gag" rules;
- ❑ Hold harmless and indemnity clauses. The AMA states, "it would be especially helpful to receive the actual provisions and contract languages that plans are using. To that end, the AMA would like to see copies of contracts, memos, treatment denial letters, and insurance policies." The AMA wants the physician to include his/her address, phone and fax information, but the results, I am sure, will be kept confidential.

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312-464-5846 (FAX)

I spoke to Carol O'Brien at the recent AMA meeting. She expressed how important it is for doctors to write, FAX, or call their experience in with the present health care system. Congressman Newt Gingrich, who appeared via satellite at the AMA meeting, may hold hearings on managed care.

Continued on page 583

Membership Notes

SAMUEL P. SOLISH, MD

Constance Barone, MD, and David Jimenez, MD, of Columbia, Missouri, received the American Medical Association Young Physicians Section's (AMA-YPS) Annual Community Service Award during the Association's annual meeting in June.

Constance Barone, MD, a plastic surgeon and **David Jimenez, MD,** a neurosurgeon, both from Columbia, Missouri, received the American Medical Association Young Physicians Section's (AMA-YPS) Annual Community Service Award during the Association's annual meeting in June. Drs. Barone and Jimenez were honored for their work in establishing a craniofacial surgery program at the St. Martin de Porres Charity Hospital in Manila, Philippines. In 1994, they traveled with a team of speech pathologists, nurses, geneticists, and surgery residents to Manila. They operated on seven children with encephaloceles, and 150 cleft lip and palate patients. In order to provide ongoing care for these patients, they established an exchange fellowship program with a neurosurgeon and plastic surgeon at the University of Missouri Hospital. A collection program of recyclable surgical supplies was established. During a second mission in 1995, 12 major craniofacial encephaloceles, and 100 cleft lip and palate patients received treatment. Through the fund raising efforts of Drs. Barone and Jimenez $10,000 was given directly to the charity hospital. To address educational needs of the local Philippine health care providers, several symposia were held on the management of these complex patients.

The AMA-YPS instituted the community service award for exemplary projects completed by young physicians. The award is intended not just to recognize young physicians for their fine work, but also to raise public awareness of community involvement by young physicians.

Leonard Berg, MD, professor of neurology at Washington University School of Medicine, has received a five-year center grant from the National Institute on Aging for continued support of the Alzheimer's Disease Research Center. First funded in 1985, the center was one of the first established in the United States. The second five-year grant followed in 1990. The grant supports clinical research, basic research, educational outreach and training.

Philip E. Cryer, MD, professor of medicine, and director of the Division of Endocrinology, Diabetes and Metabolism at Washington University School of Medicine, has been named the Irene E. and Michael M. Karl Professor of Endocrinology and Metabolism. Dr. Cryer is also director of Washington University's general clinical research center. His research has been instrumental in explaining the physiology of glucose counterregulation and focuses on the role of the hormone epinephrine. Dr. Cryer is president-elect of the American Diabetes Association and is a past recipient of the Banting Medal, the highest scientific award given by the Association.

David Mehr, MD, assistant professor of family and community medicine at the University of Missouri-Columbia School of Medicine, will take part in The Robert Wood Johnson Foundation's Generalist Physician Faculty Scholars Program. The four-year grant award is designed to assist promising junior faculty in generalist medicine (family practice, general internal medicine and general pediatrics) to become productive researchers. Only 15 individuals are selected annually from among junior faculty in primary-care medicine. So far, 45 physicians have received these awards in the program's three-year history. MU's department of family and community medicine is the only such department in the nation to have two Robert Wood Johnson Foundation's Generalist Physician Scholars.

William A. Peck, MD, executive vice chancellor for medical affairs and dean of the Washington University School of Medicine is the principal investigator of the planning grant recently given to the medical center from the National Cancer Institute (NCI). The three-year grant will be used to guide the assembly of the Washington University Cancer Center. A steering committee chaired by **Stanley J. Korsmeyer, MD,** professor of medicine, will oversee the planning process.

Washington University faculty will provide team medical services for the St. Louis Rams: **Robert A. Shively, MD,** assistant professor of orthopaedic surgery; **Bernard T. Garfinkel, MD,** clinical professor of medicine; **James F. Loomis Jr., MD,** a clinical instructor of medicine; and **Richard H. Gelberman, MD,** the Fred C. Reynolds Professor of orthopaedic surgery and head of the orthopaedic surgery department.

Daniel L. Silbergeld, MD, assistant professor of neurological surgery and anatomy and neurobiology at Washington University School of Medicine, in a study funded by the McDonnell Center for Higher Brain Function discovered that removal of brain tumors still leaves migrating tumor cells. The study was published in the *Journal of Neurosurgery*. In a related study he found that the anti-cancer drug Taxol when used for malignant glioma may slow the growth of the tumor but lead to increased tumor invasion. This study was published in *Anti-Cancer Drugs* and was supported by the NIH. Dr. Silbergeld suggests physicians should shift their focus away from visible tumors, though tumor removal is an important treatment, and pay more attention to migrating cells.

Martin B. Wax, MD, associate professor of ophthalmology and visual sciences at Washington University School of Medicine, is the principal investigator in a study that has identified a protein that suggests that a common form of glaucoma may be caused by an autoimmune disorder.

MSMA members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

IN MEMORIAM

George W. Blankenship, MD, 83, of Neosho, Missouri, died July 29, 1995, following an illness. Dr. Blankenship received his medical degree at Washington University in 1938. Following an internship at City Hospital and Missouri-Pacific Hospital in St. Louis, he practiced with a group of physicians in Boonville, Missouri. He enlisted in the U.S. Navy during World War II and was assigned to the Destroyer USS Taussig in the South Pacific Theatre. Following the war he returned to McDonald County and started a practice in Anderson, Missouri. A few years later he moved to Neosho and joined Sale hospital as a physician and surgeon. Dr. Blankenship retired in 1989 following more than 50 years of medical practice. After retirement, he continued to work with Corner Stone Bank in management as a principal stockholder.

Edward H. Bowdern, MD, 94, of St. Louis, Missouri, died July 4, 1995, of complications from emphysema. Dr. Bowdern received his medical degree at St. Louis University in 1928. His first assignment was as ship doctor on an around-the-world cruise on a passenger liner, the SS Van Buren. He returned to St. Louis and joined the staff of St. John's Mercy Medical Center as a general surgeon. He was on the faculty of St. Louis University Medical School, teaching surgery for more than 25 years. He operated until 1970 and continued to see patients through the early 1980s. Dr. Bowdern was a member of the American College of Surgeons.

Richard E. Johnson, MD, 80, of Columbia, Missouri, died June 16, 1995. Dr. Johnson received his medical degree from Johns Hopkins Medical School in 1939. He enlisted in the Naval Reserve during World War II and served on the USS Nelson. He completed his residency in anatomic pathology in 1948 and served as a pathologist at Ellis Fischel State Cancer Hospital from 1948 to 1958. Dr. Johnson was a pathologist at Boone County Hospital from 1960 to 1968 and was the Boone County coroner from 1960 to 1972. He became a member of the Boyce and Bynum Pathology Laboratory in 1969 and retired in 1985. After retirement he volunteered at Boone Hospital Center, working with LifeLine and programing computers.

Garland F. Smith, MD, 80, of St. Louis, Missouri, died July 28, 1995, after a long illness. Dr. Smith received his medical degree at Washington University in 1941. He was a major in the Army Medical Corps during World War II. Dr. Smith was in private practice as an orthopedic surgeon for 32 years. He was a former chief of orthopedics at St. John's Mercy Medical Center in Creve Coeur. He also had been on the staffs of DePaul Health Center in Bridgeton, St. Joseph Hospital in Kirkwood, St. Anthony's Medical Center in South St. Louis County, Deaconess Hospital and Shriner's Hospital for Crippled Children. He retired in 1985. Dr. Smith was a member of the American Academy of Orthopedic Surgeons and the American College of Surgeons.

Continued on page 578

AMA PHYSICIAN'S RECOGNITION AWARDS

Benjamin I. Albano, *Crystal City*
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Stephen H. Weinstein, *Columbia*
Blake J. Williamson, *Kansas City*

In Memoriam, Continued from page 577

Eamil A. Stricker, MD, 86, of St. James, Missouri, died June 23, 1995. Dr. Stricker received his medical degree at Northwestern University, Chicago, and became a diplomate of the National Board of Medical Examiners in 1937. He practice in St. James and Rolla, Missouri for several years, with post-graduate training in surgery at the Mayo Clinic. He served in the U.S. Army Air Corps for four years during World War II, achieving the rank of major while serving as the group flight surgeon for the 339th Fighter Group stationed in Fowlmere, England. Dr. Stricker returned to St. James in 1946 and practiced medicine and surgery until his retirement in 1994, having provided 57 years of service to the community. He was elected president of the Missouri State Medical Association in 1973. He served as an associate professor of medicine for the University of Missouri, and as the regional examiner for the United State Immigration Department since 1959. He was the most senior aviation medical examiner for the Federal Aviation Agency, having served in that capacity since 1939. Dr. Stricker was a member of the Aerospace Medical Association and the American Society of Abdominal Surgeons.

Barnard C. Trowbridge, MD, 83, of Prairie Village, Kansas, died July 19, 1995. Dr. Trowbridge received his medical degree at Washington University in 1937. During World War II he was a flight surgeon and chief of otolaryngology at the AAF School of Aviation Medicine in Randolph Field, Texas. He practiced medicine as an Eye, Ear, Nose, and Throat specialist in Kansas City for 53 years until his retirement in 1990. He formerly served on the staffs ofTrinity Lutheran Hospital, Research Medical Center, and Baptist Medical Center. Dr. Trowbridge was a member of the Metropolitan Medical Society of Greater Kansas City, the Missouri State and American Medical Associations. He was a fellow of the American College of Surgeons, and the American Academy of Ophthalmology and Otolaryngology, and Associated Fellow of the U.S. Aero Medical Association. He was a charter member of the Missouri Ophthalmological Society and a member of the Pan-American Association of Ophthalmology. He was a past president of the Kansas City Society ofOphthalmology and Otolaryngology.

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Can Missouri Health Care Providers Be Held Liable Under Strict Product Liability Law?

Clark H. Cole, JD

This is the second in a continuing series of columns by the Missouri Bar's Medical Legal Relations Committee. These monthly dispatches are offered by Missouri Bar members to discuss a broad range of legal issues of interest to Missouri physicians. The contributors are attorneys in various positions from all parts of the state.

Are Missouri health care providers subject to strict product liability claims? The answer, at least for now, depends upon where in Missouri the case is filed - the Eastern, Western or Southern District of the Missouri Court of Appeals.[1]

Bell v. Poplar Bluff Physicians Group, Inc. d/b/a Doctors Regional Medical Center

A recent case of concern to health care providers is the 1994 decision by the Southern District of the Missouri Court of Appeals in *Bell v. Poplar Bluff Physicians Group, Inc. d/b/a Doctors Regional Medical Center.*[2] In *Bell*, the plaintiff claimed she was injured by a defective temporomandibular interpositional implant. The manufacturer of the device acknowledged the implants were defective and was soon overwhelmed with claims - becoming insolvent. Plaintiff then sought to hold Doctors Regional Medical Center ("the medical center") liable under the theory that it participated in the placement of a defective product into the stream of commerce - by selling the implant to the patient - and was therefore liable under the theory of strict product liability.

The trial judge dismissed the product liability claim, reasoning that strict product liability law does not apply to health care providers, even if they happen to be involved in the sale or distribution of a defective product as an incident to their primary role of providing medical services.

Overruling the trial court, the Southern District reinstated the product liability claim against the medical center. The court reviewed the development of strict product liability law in Missouri as well as the recent passage of "tort reform" legislation in the medical malpractice and product liability areas. The court said that, based upon its review of the law, it simply could find no basis for creating an exception for health care providers from strict product liability when providers participate in the sale or distribution of defective products.

Bell Creates Split Among Missouri Appellate Courts

The *Bell* case created a split among the appellate districts in Missouri that continues to this day. In *Hershley v. Brown*,[3] a 1983 case from the Western District, the court held that strict liability is **not** a basis for recovery against physicians. In that case, the court chose to align itself with the majority of courts from other states that do not apply strict product liability to providers of medical services. In contrast, the Southern District in *Bell* expressly disagreed with *Hershley* and chose not to follow it.

Consequently, applicability of strict product liability to health care providers in Missouri currently depends on where in the state a case is filed. The *Bell* case is controlling in the Southern District and clearly stands for the proposition that hospitals may be held liable in strict product liability if they sell or distribute a defective product. While the *Bell* court declined to address whether *physicians* could also be liable, it is clear from the court's analysis that physicians will be equally subject to liability if they participate in providing a defective product for consumption by a patient.

Continued on page 582

Continued from page 581

In the Western District, the *Hershley* case stands for the proposition that physicians may not be sued in strict product liability. While the *Hershley* court did not have before it a claim against a *hospital*, the policy reasons cited by the court appear to be equally applicable to hospitals and physicians.

Meanwhile, in the Eastern District, there currently is no published opinion directly on point[4]. Thus, the decision in the Eastern District when such a case arises will turn upon whether that district chooses to follow the reasoning of *Bell* or *Hershley*.

Significance of Bell: Commentary

Strict product liability (sometimes known as "product liability" or "strict liability") has existed in Missouri since its judicial adoption by the Missouri Supreme Court in the 1969 case of *Keener v. Dayton Electric Manufacturing Co.*[5] In contrast to medical malpractice liability, which requires negligence on the part of the defendant or its agent in order for liability to attach, strict liability may attach even though all possible care has been used. Since *Keener*, Missouri law has held liable all those who participate in placing in the stream of commerce a product which causes injury while being used in a reasonably anticipated manner and which the jury deems to have been "defective" and "unreasonably dangerous" either by virtue of its design, manufacture or failure to bear an appropriate warning.

Health care providers could be subjected to strict product liability under *Bell* in a variety of situations. Under the *Bell* court's reasoning, it would seem that any physician or institution having any significant involvement in the provision of a product for consumption by a patient is subject to a product liability claim in the event a defect in the product causes injury. Liability should only apply where the product is being sold or provided **to** a patient - and should not apply, for example, where a patient is injured because of a defect in a product merely being used by the physician.[6]

The *Bell* court noted that the medical center paid $154 for the implant and charged plaintiff $283 for it. The court said it was not placing great significance on the fact of the mark-up.[7] This indicates that even if a defective product were distributed to a patient **at cost** the *Bell* court would have applied strict product liability to those participating in its distribution.

Bell is also significant because it holds that the two year statute of limitations does not protect providers in strict liability cases. Rather, the five year general tort statute applies.[8]

In many cases, a physician or hospital providing a product to a patient will do so without modifying the product in any way. Under these circumstances, Missouri law provides a procedure whereby a health care provider can extricate itself from the lawsuit.[9] This is not always a completely satisfactory solution to the problem, however. The statute only applies where the manufacturer is also named as a defendant and is shown to be fully solvent. Moreover, the health care provider must go through the procedural process required under the statute, and, even if successful, remains subject to the possibility of being brought back into the case if it appears total recovery cannot be had against the manufacturer.

If a judgment or settlement is obtained against a health care provider under product liability theory, the provider may be able to obtain indemnity from the manufacturer for any such amount plus defense costs incurred by the provider.[10] Nevertheless, the provider may be subject to involvement in protracted litigation before ultimately obtaining indemnification.

Plaintiff's attorneys will undoubtedly have reason to try to name health care providers as defendants in product liability lawsuits. In a case such as *Bell*, where the manufacturer is insolvent, plaintiff's attorneys have an obvious motivation to identify and sue other parties who may have been involved in furnishing the product. Plaintiff's attorneys applying *Bell* may also be motivated by venue, discovery or other strategy reasons to sue health care providers under strict product liability theory.

Conclusion

Health care providers unhappy with the *Bell* decision would be wise to lobby the Missouri legislature to statutorily exempt health care providers from the broad sweep of product liability law. Until that happens, and until the Missouri Supreme Court chooses to take a case for purposes of resolving the current split, Missouri law on this issue will continue to vary among the three Missouri appellate districts. **MoMed**

References

1. The Eastern District sits in St. Louis and encompasses the City of St. Louis and counties of Audrain, Cape Girardeau, Clark, Franklin, Gasconade, Jefferson, Knox, Lewis, Lincoln, Madison, Marion, Monroe, Montgomery, Osage, Perry, Pike, Ralls, St. Charles, St. Francois, St. Louis, Ste. Genevieve, Scotland, Shelby, Warren and Washington. The Western District sits in Kansas City and encompasses the counties of Adair, Andrew, Atchison, Bates, Benton, Boone, Buchanan, Caldwell, Callaway, Carroll, Cass, Chariton, Clay, Clinton, Cole, Cooper, Daviess, DeKalb, Gentry, Grundy, Harrison, Henry, Holt, Howard, Jackson, Johnson, Lafayette, Linn, Livingston, Macon, Mercer, Miller, Moniteau, Morgan, Nodaway, Pettis, Platte, Putnam, Randolph, Ray, Saline, Schuyler, Sullivan, Vernon and Worth. The Southern District sits in Springfield and Poplar Bluff and encompasses the counties of Barry, Barton, Bollinger, Butler, Camden, Carter, Cedar, Christian, Crawford, Dade, Dallas, Dent, Douglas, Dunklin, Greene, Hickory, Howell, Iron, Jasper, Laclede, Lawrence, Maries, McDonald, Mississippi, New Madrid, Newton, Oregon, Ozark, Pemiscot, Phelps, Polk, Pulaski, Reynolds, Ripley, St. Clair, Scott, Shannon, Stoddard, Stone, Taney, Texas, Wayne, Webster and Wright.
2. 879 S.W.2d 618 (Mo.App. 1994). The Missouri Supreme Court declined to accept transfer of the case for review.
3. 655 S.W.2d 671 (Mo. App. 1983).
4. The Eastern District has allowed a strict liability claim against a pharmacy that supplied defective crutches. *Welkener v. Kirkwood Drug Store Co.*, 734 S.W.2d 233 (Mo.App. 1989). Pharmacists are included in the broad definition of health care providers under Missouri medical malpractice statutes, MO.REV.STAT. § 538.205(4) (1994). Because their primary business is selling *products*, however, their situation is arguably distinguishable from that of hospitals and physicians, whose occasional sale of products is secondary to their primary role of providing *services*. The Eastern District's decision in *Racer v. Utterman*, 629 S.W.2d 387 (Mo. App. 1981), *cert. denied*, 459 U.S. 803 (1982) also bears mention. There, the "defective" product was a surgical drape that caught fire during surgery. The court said the injured patient could not pursue a strict liability claim against the hospital, because the drape was purchased by the hospital for its own use - not for consumption by the patient. Thus, the court said, the hospital was not in the business of selling drapes and no strict liability claim was allowed.
5. 445 S.W.2d 362 (Mo. 1969).
6. *Bell*, 879 S.W.2d at 620.
7. *Id.* at 619n.1.
8. *Id.* at 623.
9. MO.REV.STAT. § 537.762 (1994).
10. *Welkener, supra*, at 238.

The Author

Clark H. Cole is a partner in private practice in the St. Louis office of Armstrong, Teasdale, Schlafly & Davis. He is a trial lawyer involved in a wide range of medical-legal issues, including medical malpractice defense. He is active in state and national bar associations, serving previously as Chair of the Missouri Bar Insurance Law Committee and currently as a member of the Board of Directors of the Missouri Organization of Defense Lawyers and as Vice-Chair of the ABA Health Insurance Law Committee.

GALE, Continued from page 575

Gingrich stated that he wanted physicians, and more specifically AMA input on health care reform. In turn, the AMA desperately needs physician input on the present system of health care because the insurance industry, the hospital associations and consumer organizations like AARP will also be testifying.

Some physicians think that a collection of this type of data is anecdotal. Indeed it is. But I can say from my limited experience in testifying before a Missouri Senate committee and speaking personally to state legislators that politicians love anecdotes much more than statistics.

For example, at the AMA meeting after a particularly heated discussion on managed care, a Florida delegate told me an "anecdote" about managed care in his state. An HMO contracted with a hospital 30 miles from a particular community because the hospital gave the HMO a 15% discount. This distance posed a hardship for chronically and seriously ill patients. The issue became more than one of convenience when an 11-year-old boy with an acute asthma attack died on the way to the hospital.

When I returned to Missouri, I heard another "anecdote" about how a local HMO utilization review committee pressured a pregnant woman with hypertension to be discharged from the hospital. Shortly thereafter she entered another local hospital with eclampsia. She and the fetus died. I am told that the HMO settled a subsequent lawsuit with a huge payout.

Every month my colleagues tell me about managed care utilization review decisions which are not in the best interest of patients. These cases represent the corporate and insurance bottomline mentality which pervades health care today.

This mentality was epitomized in a recent interview that columnist David Broder had with the current U.S. House Majority Leader (*St. Louis Post-Dispatch*, 6/23/95). The majority leader expressed his agreement with the 19th century railroad tycoon, William Vanderbilt, who said: "The public be damned; I work for my stockholders." The House Majority Leader should tell this to the families of the 11-year-old boy and the pregnant woman.

Some physicians no doubt do not share my opinion about managed care. That's fine. That's the way it should be in a healthy democracy. The AMA wants everyone's views, including the supporters of managed care.

If you care about your patients, the AMA wants to hear your comments, both positive and negative, about private health care in America today. MoMed

MSMA Women Physicians Leading Change

Lizabeth R. Starnes, MSMA Director of Communications

Women physicians are leading change in the profession of medicine through their involvement in important public health initiatives and in addressing the need for professional/family balance within the medical education and training environment. In recognition of September as Women in Medicine Month, **Missouri Medicine** *talked with five MSMA female physicians -- all healers, all leaders -- to recognize the growing number and influence of women physicians in the profession and the community.*

Women physicians today are represented at all levels of medicine. They have moved into the medical mainstream and successfully raised professional awareness of their contributions and concerns. They are serving in leadership roles in medical practice, government, research, academia, and organized medicine. Yet female physicians still face gender-biases, economic discrimination, chauvinism, and other gender-based inequities.

To these women, physician-veteran Meredith Payne, MD, has some sage advice: “The common chauvinist attitude, that women just don’t belong in medicine, can’t be changed. But ignore it and go about your business. Usually you have enough support from colleagues that it doesn’t have much of an impact. As time goes on, chauvinism becomes less of an issue.”

> ***“The common chauvinist attitude, that women just don’t belong in medicine, can’t be changed. But ignore it and go about your business. Usually you have enough support from colleagues that it doesn’t have much of an impact. As time goes on, chauvinism becomes less of an issue.”***
>
> *-Meredith Payne, MD*

Ann Peick, MD, FACS, past president of the Butler-Wayne-Ripley-Carter Component Society, member of MSMA’s Medical Economics, Third-Party Medicine and Governmental Relations Commission and Public Affairs Commission, and associate professor of surgery, remembers when it was less common for women to enter the profession. According to a United States Physician Characteristics and Distribution report, in 1970, there were only 26,000 women physicians in the United States. In 1994, this group marked a fivefold increase to 133,000 female physicians, comprising close to 20% of all U.S. physicians. In Missouri, the female physician population is 2,692 strong. Twenty-five years ago, there were only 2,300 female medical students. In 1995, medical schools enrolled nearly 18,000 female students, representing more than 40% of all medical students - 50% in more than a few schools. “The liberalization of medical school admission policies and equal opportunity has allowed for the entry of more professional women in medicine,” Dr. Peick said.

Do male physicians see women physicians as a threat?

Dr. Payne is a MSMA 3rd District Councilor, treasurer for both the Missouri Assembly of Plastic and Reconstructive Surgery and the St. Louis American Women’s Medical Association, and past president of the St. Louis Area Plastic Surgeons. She said that she escaped a lot of harassment by getting married when she was in medical school and starting in practice with her father. “Admittedly, I experienced a few unsavory episodes, but once I proved I could do my job well and carry my load, I was accepted,” she said.

Dr. Payne is also an attending physician and associate professor of the plastic surgery residency program at St. Louis University. “We had our first female resident in 1988 and since then have had one or two each year,” she said. “Not only have they been outstanding workers but tension has generally been minimal.”

Jo-Ellyn Ryall, MD, past Speaker of the MSMA House of Delegates, first woman AMA Delegate from Missouri, and past president of her local psychiatric society, pointed out that the sheer

Jo-Ellyn Ryall, MD, AMA Delegate, addresses the MSMA Council at a recent meeting.

number strength of women in medical schools is starting to make a difference. "We were 10% of the class in the '70s and professors would show pornographic slides to illustrate anatomy or tell sexist jokes," she said. "If 10% left the room in protest, it wasn't a big deal. Now, if 50% get up in protest, that's half the class and sends a real message to the professor."

In agreement, Dawn Kleindorfer, MSMA Student Councilor, adds, "The difference between now and 15 to 20 years ago, is that now we can take action if there is gender discrimination."

"My class is 50% women and 99% of the male students are very comfortable with us. I personally don't feel that my choices have been limited by being a female," she said. However, she does feel that some male medical professors consistently speak to male medical students. "I have to become more aggressive just to get their attention," she said.

KLEINDORFER
DR. BARBEE

Dawn Kleindorfer, Student Councilor discusses with the MSMA Council the possibility of starting a clinical rotation program.

Dr. Ryall, who has had a psychiatry practice in St. Louis for 18 years, has one story of a prejudiced viewpoint that she once encountered. "We were staffing a patient and it happened that we had two female medical students, female supervisor (me), a female resident, a male social worker, and a female nurse. After the interview, the patient said, "thank you ma'am, thank you ma'am, thank you doctor, thank you ma'am. It was the male social worker that the patient had called doctor."

According to the AMA, longitudinal studies indicate that 50-60% of women physicians have experienced incidents of discrimination and sexual harassment throughout their careers. A random poll in the Fall 1992 AMA Women in Medicine newsletter elicited a response from 2,500 readers, 75% of whom said that they had experienced sexual harassment in medical school (79%), residency training (64%) and practice (42%).

Perhaps the most encouraging news to young women interested in medicine is that none of these physicians felt limited as a woman in choosing her specialty.

Dr. Peick chose general surgery because "the procedures are often curative, unlike the chronic diseases of hypertension and diabetes," she said.

Dr. Payne, 68, chose surgery because of her St. Louis City Hospital experience. "I wanted to go into surgery shortly after I was exposed to it as a junior. I requested a general surgery internship at City Hospital and there became fascinated with plastic surgery." Dr. Payne felt that although plastic surgery was an "anti-stereotypical" specialty, "Since I'd gotten this far in general surgery, I might as well go further and do what I like." That fascination grew into a 30-year career with a successful general and plastic surgery private practice in St. Louis.

TES
DR. PAYNE
DR. GOLDMAN

Meredith Payne, MD, Third District Councilor, represents St. Louis Metropolitan Medical Society.

According to the 1995 United States Physician Characteristics and Distribution report, the top three specialty choices of women are internal medicine (19%), pediatrics (15%), and family practice (10%). Another specialty attraction to female physicians is obstetrics and gynecology, a surgical specialty. It was the choice 7.4 % of women, but only 4.8% men.

Deborah Jantsch, MD, MSMA 7th District Councilor and Legislative Committee member, graduated from medical school at age 35. "My first rotation was in surgery and it was very confusing to me. When I came to OB/GYN, it all fell into place. I enjoy taking care of women. It's very challenging," she said.

Although there are still certain specialties that are 'geared' toward women physicians, "I think the stereotypes are breaking down," said Dr. Jantsch. "There are large

Continued on page 586

DR HAHN
DR O'SULLIVAN
MR. SWARENS

Debbie Jantsch, MD, reports to the Council on Renaissance HealthCare Partners, a physician-directed organization in Kansas City.

Continued from page 585

numbers of women entering medical school and I think it's easier to pick some tracks than others that have a favored life-style, especially for women juggling family."

"I never felt limited," said Dr. Peick, who at age 44 has had a private practice in Poplar Bluff for nearly six years. "Rather, as a woman I felt that I had more to offer, especially when one considers that the primary health care consumers are women and often women prefer being treated by another woman, perhaps out of a feeling of camaraderie."

Indeed, according to these women physicians, many female and male patients request a female physician if given the choice.

"I think the impact of women in the medical market place is positive," said Dr. Jantsch, who is also the secretary to Renaissance HealthCare Partners, a physician-directed organization in Kansas City. "Sometimes patients choose a female physician as their primary care doctor specifically because of gender. Women tend to pay more attention to listening to the true health concerns of their patients."

"Some patients ask for a female physician when approached," said Dr. Ryall. "Many men will say they would rather speak to a woman psychiatrist because they don't want to compete with another man." She said with a grin, "It's easier to talk to Mom." Dr. Ryall's private office allows her to get comfortable with her patients. "I have been known to hold a hand when comfort is needed. Females tend to give more physical comfort than males. It also seems to be appreciated more."

"I believe the true difference is not necessarily gender-oriented, but rather the degree of empathy, compassion, dedication, commitment, and skill that lie within in the individual," said Dr. Peick.

> ***"I believe the true difference is not necessarily gender-oriented, but rather the degree of empathy, compassion, dedication, commitment, and skill that lie within the individual."***
>
> *-Ann Peick, MD, FACS*

"There's definitely a difference in the way that I relate to patients," said Dr. Jantsch. "I try to be intuitive. There's always a closeness between me and my patients. I don't sit across the desk with my arms crossed. There is a degree of accessibility to a patient's problem that is different with men and women."

Managed care practices that focus on the bottom line may penalize women physicians for taking more time to answer patients' questions. "Regardless of managed care, I go over all the medical options with the patient," said Dr. Jantsch.

"The big equalizer will be managed care because there won't be the kinds of salaries we used to see in private practices," said Dr. Ryall.

Probably the greatest deficit still in existence is the equal pay and equal opportunity. "It is on paper but it is not in practice," said Dr. Payne. "Two persons equally trained are not equally considered for position and females in some administrative positions are not given equal pay."

Male physicians tend to earn more than female physicians, whether it's a matter of hours or choice of practice, such as salaried position vs. private practice. The AMA Center for Health Policy Research reported that the 1993 unadjusted net income among non-federal physicians, excluding residents, for male physicians was $200,900; for female physicians, it was only 62% of her male colleagues' income, $124,900.

While many women have successfully broken through the salary glass ceiling, the worlds of academic administration and medical research still maintain barriers.

According to a 1994 report on Women in Academic Medicine Statistics, there were only four female deans of medical schools. There were 18 Senior Associate Deans, 131 Associate Deans and 118 Assistant Deans. Fifty percent of medical school assistant professors are women, but only 10% of females are at the professor level.

"If you look at the top of the academic ladder, the female presence is sparse. Junior faculty have a higher percentage of women," said Dr. Ryall.

A 1990 report on gender disparities in clinical decision-making by the AMA Council of Ethical and Judicial Affairs concluded that "women have been and continue to be disadvantaged because of inadequate attention to the research, diagnosis, and treatment of women's health care problems." Medical research has primarily used the male model. "There is no doubt about research dollars. Research has been dedicated to the male aspects of diseases in the past," said Dr. Payne.

Women researchers tend to have less assigned research space and less financial support. A study found that in the 40-59 age group, 16% of the women scientists and 30% of the men had grant support. Barriers for equality are gender bias, isolation in a male-dominated profession, lack of mentors, and lack of flexible scheduling.

The solution? Increase the number of women physicians in positions of authority in teaching, research, and practice to enhance awareness to social and cultural factors that lead to these gender disparities in patient diagnosis and treatment. Currently, there is a development of a women's health curriculum and philosophy to be "infused" at all levels of medical education, medical school, graduate, and continuing.

Options also narrow with the addition of family responsibilities. Women physicians continue to call for more flexibility in the training, practice and academic settings. Having a family is difficult for all physicians, but especially for women physicians. Can one have it all?

When Dr. Peick told her male advisor at St. Louis University School of Medicine that she wanted to become a surgeon, he told her that if she wanted a family, she had better pick another specialty.

"You can do whatever you want," said Dr. Payne. "Women have been doing it for years. You can have a wonderful family if you surround yourself with dedicated help."

"Women are adaptable. They look for what is necessary to maintain their profession, their families, their personal lives, and can accommodate whatever changes confront them," said Dr. Jantsch.

Balancing the physical and emotional demands of child-raising with her professional responsibilities may be one of the most difficult challenges faced by a woman physician. The AMA's 1990 maternity leave surveys found that 75% of residency programs had a maternity leave policy.

> ***"Women are adaptable. They look for what is necessary to maintain their profession, their families, their personal lives, and can accommodate whatever changes confront them."***
>
> ***-Deborah Jantsch, MD***

The AMA Board of Trustees Report, I-90 and I-91, urged hospitals to establish and support child care facilities, and when structuring those services, to take into consideration the child care needs of physicians-in-training.

Ms. Kleindorfer at age 24 wants to have children some day. "If I can't handle one aspect of my life, it's not because I'm not competent, it would be because of the demands," she said.

A common goal of these leaders is to support the continued growth of women in the medical profession. They encourage female physicians to become more involved in organized medicine.

In her third year of medical school at Washington University, Ms. Kleindorfer plans to specialize neurology. Why did she go into this profession? "I want to heal," she said. "I also want to communicate to young women that they can become physicians, that success in the profession of medicine is not restricted to men," she added. She continues to talk to young women from her hometown to encourage them to be physicians.

Dr. Payne said, "I feel my role is to learn and absorb as much as I can and "evangelize" as far as possible. This is the only method we have of protecting and preserving the integrity of the profession."

"When women choose to get involved politically, their opinions are valued and they gain respect," said Dr. Jantsch.

Dr. Ryall said, "The American Medical Women's Association provides a lot of mentoring to women physicians," said Dr. Ryall, who is Speaker of its House. "Contact with role models helps encourage further participation."

To encourage a greater participation by women physicians, the AMA is working to provide a forum for identifying, addressing, and educating the profession about concerns to women in medicine, in particular: childbearing/rearing issues in training and practice; gender-related organizational leadership barriers; and gender-bias in the profession, including economic discrimination, sexual harassment, and other gender-based inequities.

"We should enforce the roles of women in medicine by supporting and encouraging female colleagues. Assure them that not only is it possible to have a wonderful life in this profession, but that you can do everything you really want to if you just keep your goal in mind," said Dr. Payne.

"We need to remind ourselves that we can accomplish whatever it is that we wish," Dr. Jantsch said. "It is a good time for women to be involved in medicine." **MoMed**

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Leading Change: Women in Medicine 1995. American Medical Association.

Retrospective Analysis of the Utilization of Right-Sided Cardiac Catheterization in Association with Left-Sided Cardiac Catheterization in Patients With Coronary Artery Disease

Gary J. Fortune, DO, MPH, E. Andrew Balas, MD, PhD
Brad Hegemann, MA, Russell C. LaFerney, BSBA, MHA, Theresa Luebbering,
Helen J. Neikirk, MA, and Rhonda Weathers, LPN

The Missouri Patient Care Review Foundation (MPCRF), the Peer Review Organization (PRO) for Missouri, has modified its approach to quality improvement under the Fourth Scope of Work (SOW4) through implementation of the Health Care Quality Improvement Program (HCQIP). In contrast to the traditional PRO approach to quality assurance which relied on the review of individual medical records, HCQIP involves the analysis of large administrative or claims databases, sharing of individual and group data with the physician and hospital communities, and developing cooperative projects with health care providers to improve the overall quality of health care and utilization of services.

Currently controversial is the use of right heart catheterization (RHC) in conjunction with left heart catheterization (LHC) in patients who have been diagnosed with or are being evaluated for coronary artery disease (CAD). According to recent research, RHC has become more common in patients who are being evaluated for CAD without concomitant valvular heart disease, pulmonary disease, or certain congenital heart conditions.[1] For these diagnoses, the utility of combined right and left catheterization procedures is low.[1,2,3]

RHC, while not a normal part of coronary angiography, may be performed as a medically justified procedure in selected patients. During RHC, intracardiac pressures, oxygen content of blood samples, dye-dilution curves, cardiac output measurements, and ventricular or pulmonary artery angiography may be obtained.[5] When abnormal right ventricular function (i.e., right ventricular infarction, tricuspid regurgitation, ventricular septal defect), pulmonary artery disease (i.e., pulmonary hypertension, pulmonary emboli), or heart failure are present or strongly suspected, RHC is an important diagnostic tool. Additionally, in patients with substantial bradycardia, ventricular block, or cardiac instability, RHC, with a pacing catheter connected for standby pacing, is an essential safety procedure to reduce the risk associated with coronary angiography.[5]

Several health services research studies, as well as suggested clinical guidelines by the American College of Cardiology (ACC), conclude that RHC should not be utilized routinely in combination with LHC and coronary angiography in patients with coronary arteriosclerosis.[1,2,3,5] In patients with uncomplicated CAD, the ACC recommends that the concomitant use of RHC, in conjunction with the left heart procedure, may contribute to the acquisition of additional information regarding patient management in selected cases. However, its use should be justified by the physician performing the procedure.[7]

In contrast, an opposing philosophy, justifying routine RHC in patients with suspected CAD, suggests that it is important to learn as much information about the hemodynamics, anatomy, and physiologic state of the heart as possible as it may prove valuable in subsequent patient management.[4] However, several other studies have concluded that RHC rarely provides additional information that would profoundly alter case management.[1,2,3]

The Island Peer Review Organization, The PRO for New York, recently initiated a cooperative improvement project focused on reducing the number of questionable RHC procedures in patients with uncomplicated CAD.[6] Based on the success of this project, MPCRF conducted a retrospective analysis of the use of RHC in Missouri. The objectives of this retrospective analysis were to: (i) explore the variation in the use of cardiac catheterization within Missouri, and (ii) identify conflicts between suggested clinical guidelines and actual practice patterns.

Methods

Study Design

Missouri Medicine claims for acute care hospital admissions involving right, left, and bilateral catheterization procedures during fiscal years 1992 and 1993 were included in the retrospective analysis. This database was obtained via the Health Care Financing Administration (HCFA) and was utilized because it collects information from all Missouri acute care hospitals performing catheterization procedures among the state's Medicare population.

Study Sample

This analysis was designed to focus on patients with a diagnosis of uncomplicated CAD who underwent bilateral cardiac catheterization and did not have diagnoses that would have indicated the necessity of an RHC. The specific diagnoses of CAD included were acute myocardial infarction; chest pain; angina pectoris and other forms of acute, subacute, and chronic ischemia and other forms of ischemic heart disease as identified by ICD-9-CM code classification.[8] Our case definition of uncomplicated CAD was defined as a patient with a diagnosis of CAD, without a concomitant diagnosis of valvular heart disease, arrhythmia, pulmonary disease, congestive heart failure, or other cardiac conditions that may indicate the potential for cardiac instability.[1,5] Bilateral or RHC were considered appropriate for these diagnoses when identified by ICD-9-CM code classification[8] and were excluded from further analysis.

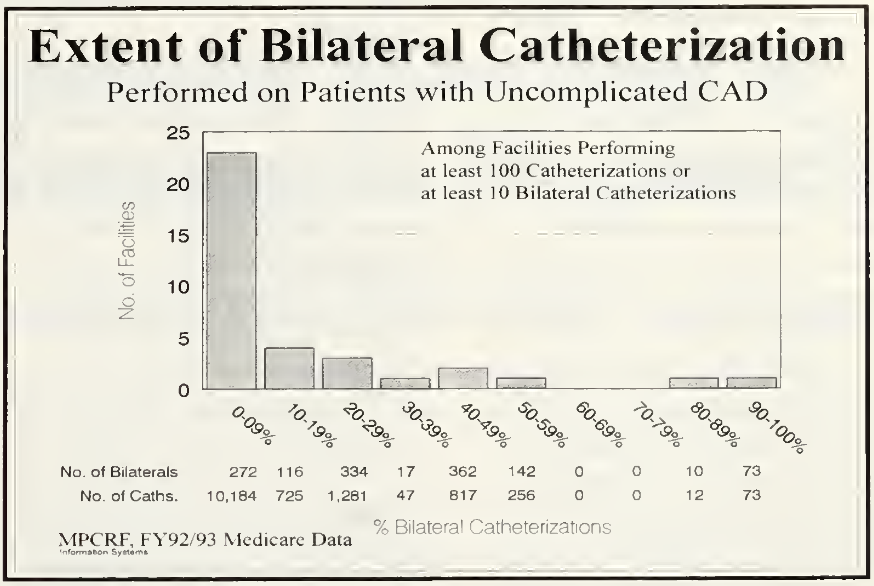

Figure 1

Figure 1

Results

Initially all 29,528 cardiac catheterizations performed in Missouri during 1992 and 1993 underwent claims analysis to calculate crude utilization rates for right-only, left-only and bilateral procedures. Of all catheterizations in Missouri, 79.0% involved only the left side of the heart. RHCs were rarely performed alone, accounting for one percent of all reported procedures.

Based on our case definition of uncomplicated CAD, 13,897 patients underwent a left-only or bilateral cardiac catheterization in 1992 and 1993. Ninety percent of the catheterizations performed involved only the left side of the heart; the remaining 10% of the cases (1,384) were bilateral catheterizations.

Sixty-four Missouri hospitals were found to have performed at least one cardiac catheterization during 1992 and/or 1993. These hospitals, while geographically representing every area of the state, were generally located in or near more highly populated regions.

Thirty-six (of the 64) hospitals performed at least 100 catheterizations **or** at least 10 bilateral catheterizations on patients with uncomplicated cardiovascular disease. *Nine of thirty-six hospitals* accounted for over two-thirds, or over 900, of the bilateral catheterizations performed on patients with uncomplicated CAD. These nine hospitals performed bilateral catheterizations for uncomplicated CAD at least 20% of the time. In addition, three of the nine hospitals performed bilateral procedures on at least 50% of their patients with uncomplicated CAD. This indicates a wide variation statewide among Missouri hospitals in the performance of bilateral cardiac catheterization on patients with uncomplicated CAD. (Fig 1)

Continued on page 590

Continued from page 589

Discussion

Based on this analysis, MPCRF convened a Study Group of practicing cardiologists and other clinicians to review the results of the analysis. The Study Group's mission was two-fold: 1) to determine medical consensus concerning the indications and use of RHC for uncomplicated CAD, and 2) to discuss what particular methods should be utilized to provide feedback information to the physicians and hospitals who are performing the procedure.

The information and clinical recommendations that MPCRF staff gathered through literature review and presented to the Study Group did not necessarily reflect the view of MPCRF. The Study Group members were considered the experts, and MPCRF relied on their medical expertise to develop consensus concerning this subject.

The Study Group members endorsed the ACC Position Statement and expressed that the ACC/AHA Task Force guideline were absolute indications for RHC.[5,7] Additionally the Study Group members emphasized that for patients who have evidence of right heart abnormalities on echocardiogram, electrocardiogram, or clinical examination, it may be appropriate to perform RHC. The cardiologists indicated that physicians should have the option to exercise their clinical judgment on performing the procedure but should also justify the use of the procedure. The Study Group felt it was the responsibility of the clinician to know the stated ACC guidelines and to act accordingly.

Conclusions

The purpose of this retrospective study was to analyze the use of RHC in Missouri for patients with the diagnosis of uncomplicated CAD and to identify practice variations that may conflict with suggested clinical guidelines. This analysis suggests that the procedure may be performed routinely, without individual case selection, in a small number of acute care facilities.

A main focus of HCQIP is to look at overall trends through data analysis and subsequently feed back the information in a nonpunitive and educational manner to the clinical community. We hypothesize that if suggested local consensus and clinical guidelines issued by the ACC/AHA Task Force regarding the appropriate utilization of RHC were disseminated to the medical community, there would be a reduction in bilateral cardiac catheterizations performed on individuals with the diagnosis of uncomplicated CAD. Based on this educational feedback approach, the Study Group endorsed MPCRF to send confidentially to each physician and hospital their own individual data, showing where they relate to their peers on performing the bilateral catheterization procedure for uncomplicated CAD with consensus information.

Conclusions and opinions expressed and methods used are those of the authors and do not necessarily reflect HCFA policy. The authors assume all responsibility for the accuracy and completeness of the PRO data used. Work is performed under Contract Number 500-92-0612 between the Missouri Patient Care Review Foundation and the Health Care Financing Administration Department of Health and Human Services.

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Post Tonsillectomy Hemorrhage: A Ten-year Retrospective Study

Walter A. Schroeder, Jr., DO, MD, FACS

Tonsillectomy remains one of the most common surgical procedures performed in the world. One of the most significant complications is postoperative hemorrhage. Though most bleeding often can be controlled with local anesthesia in an office or emergency room, some patients require return to the operating room for general anesthesia to control the hemorrhage.

A ten-year retrospective study was done to review patients who required return to the operating room for general anesthesia for control of hemorrhage.

Variables investigated include age, gender, time of surgery, onset of hemorrhage, season of the year, and the amount of blood loss noted during initial surgery. Seven of the 756 patients (.93%) required a second general anesthesia to control hemorrhage. Seasonal and gender predilictions are noted in this study. Recent trends in tonsillectomy are reviewed.

Postoperative hemorrhage creates anxiety, prolongs morbidity, and increases health care cost. Limiting this complication is clearly in the best interest of both patient and surgeon.

Tonsillectomy and adenoidectomy (T&A) remains one of the most common surgical procedures performed in the United States. Though most commonly performed in children and adolescents, the procedure is also performed throughout adult life.

The most common complication is postoperative hemorrhage in spite of modern surgical techniques and anesthesia. One of the trends in this surgical procedure is performance of the procedure as an outpatient, either as a same day procedure or as a 23-hour observation procedure. The need to limit postoperative hemorrhage is obviously important in this predominantly young population.

Materials and Methods

A retrospective study was done to evaluate all patients undergoing tonsillectomy or tonsillectomy and adenoidectomy during the period from May 15, 1989 to May 14, 1995. Any patients who were readmitted for evaluation and control of hemorrhage was evaluated.

All surgery was done with general anesthesia in one of two hospitals (St. Francis Medical Center or Southeast Missouri Hospital) or in an accredited outpatient surgical facility (Doctors' Park Surgery, Inc.). All three institutions are located in Cape Girardeau, Missouri. All surgeries were done by the author. The tonsillectomies were performed using an extracapsular dissection with wire-snare technique. Hemostatis was achieved with electrocautery plain or in combination with 2-0 plain suture ligation. Intraoperative blood loss was measured by the circulating nurse and confirmed by a member of the anesthesiology staff. The blood loss was noted in the operative record. Patients who underwent surgery were evaluated during the postoperative period. All patients were available for at least one postoperative evaluation. Data obtained during the review included age, gender, estimated blood loss at the time of surgery, time of surgical procedure, date of surgery, and the presenting compliant at the time of hemorrhage.

Indications for tonsillectomy were as follows:

1. Recurrent or chronic tonsillitis as evidenced by either:
   a) Four or more episodes of tonsillitis with anterior cervical adenitis in previous year, or
   b) With associated positive cultures for beta strep.
2. Unilateral tonsillar enlargement, suggesting neoplasm.

Table 1 - Patients Returned to the Operating Room

Procedure	Age	Sex	Initial Blood Loss	Month	Time	Hemorrhage Onset	C/O
T&A with BTT	5	F	125cc	JUL	PM	<24 hrs (8)	Bloody Emesis
T&A	4	F	75cc	APR	AM	<24 hrs (15)	Bloody Emesis
T&A with BTT	2	M	25cc	FEB	AM	<24 hrs (3)	Bloody Emesis
Tonsillectomy	17	F	100cc	JUL	PM	<24 hrs (11)	Nausea/Vomiting
T&A	18	F	100cc	AUG	PM	POD #6	Nausea/Vomiting
T&A	15	F	125cc	JUL	PM	POD #7	Clots
T&A with BTT	14	F	200cc	AUG	PM	POD #4	Nausea/Vomiting

Table 2 - Readmission for Observation Only

Procedure	Age	Sex	Initial Blood Loss	Month	Time	Hemorrhage Onset	C/O
T&A with BTT	2	F	25cc	DEC	AM	POD #6	Emesis
Tonsillectomy	29	F	100cc	JUN	PM	POD #2	Clots

Table 3 - Control of Hemorrhage Summary

Primary Hemorrhae w/o Prolonged Hospitalization	3
Primary Hemorrhae with Prolonged Hospitalization	1
Secondary Hemorrhage Readmitted	3
Total Returned to O.R.	7

Table 4 - Extra Hospitalization Summary

Readmission following Discharge	5
Prolonged Initial Hospitalization	1

3. Recurrent peritonsillar abscess.
4. Posterior nasal obstruction severe enough to cause mouth breathing.
5. Associated streptococcal infection.

Primary hemorrhage is defined as postoperative bleeding within 24 hours of the time of the surgery. Secondary hemorrhage is that which occurs after 24 hours has elapsed.[1]

Primary hemorrhage is most often believed secondary to surgical techniques. Secondary hemorrhage is usually associated with eschar removal during chewing or drinking.

Only hemorrhage requiring readmission to the hospital or requiring return to the operating room was evaluated. Minimal hemorrhage by definition in this study is hemorrhage which could be controlled by local anesthesia usually with application of silver nitrate to the bleeding site.

Results

During the ten-year period a total of 756 patients underwent tonsillectomy or T&A with or without other procedures. There were 387 male patients and 369 female patients. The age range was from 2 years to 83 years of age.

Four patients (.53%) had hemorrhage within 24 hours of the time of surgery. Three of the patients had bleeding within 12 hours. All patients presented with bloody emesis or nausea. One of four patients had prolonged hospitalization. Three patients (.40%) had secondary hemorrhage. All three were female teenaged patients who underwent surgery in the afternoon during one of the summer months. Two presented with nausea and vomiting and one had clots in the tonsillar fossae (Table 1).

Two patients (.26%) were readmitted following observation of hemorrhage occurring at home. Neither patients required return to the operating room and were discharged following overnight observation (Table 2). Table 3 shows a summary of patients requiring return to the operating room.

Three required readmission for control of secondary hemorrhage. One of the four had primary hemorrhage that necessitated and extra day of observation.

A total of 7 of the 756 (.93%) required return to the operating

Continued on page 594

Continued from page 593

room. Table 4 shows the summary of unexpected hospital utilization. Five patients required readmission and one patient had prolongation of the initial hospitalization. Six patients (.79%) required additional hospital utilization.

Discussion

Post-tonsillectomy hemorrhage is the most common significant complication of tonsillectomy. No uniform standard has been developed to define significant postoperative bleeding. Major hemorrhage is considered any hemorrhage requiring the use of general anesthesia to control the bleeding.[1]

Indications for surgery include repeat infections and symptoms of nasal and/or pharyngeal obstruction. Most patients are well-served by multiple dosages of antibiotics prior to referral for surgical evaluation. Most primary care physicians and pediatricians are aware of surgery for multiple infections; many are not aware of the significance of chronic nasal obstruction and its result on facial growth. Chronic obstruction can contribute to malocclusion and distorted midfacial development.[2] Surgery often needs to be performed regardless of the number of infections when patients have chronic obstruction.

Tonsillar asymmetry is an additional indication for surgery that some primary care physician fail to recognize. Extranodal lymphomas can present as an asymmetric large tonsil which can best be evaluated by removal of the entire tonsil. The oldest patient in this series was such a case.

A trend toward surgical specialization has been evident through the last several decades. Pratt[3] demonstrated a trend of otolaryngologists performing this procedure as opposed to other surgeons. Fewer general surgeons, pediatric surgeons and family practitioners are performing tonsillectomies. The trend reflects professional interest and requiring otolaryngologic residency training for physicians who perform surgery of this nature.

Techniques of excision have been studied to determine which technique might lead to less postoperative hemorrhage.[4-6] The results of most of these studies showed no significant difference between a variety of techniques. Electrocautery and suture techniques both control hemorrhage well. The use of laser surgery for tonsillectomy has not been done on a large scale basis. The routine us of the laser cannot be justified for most patients due to the cost. In a small series of patients the morbidity was comparable to electrocautery and offered no advantage.[7]

The cost effective evaluation of pre-operative patients continue to be of interest. The use of PT and PTT for screening of coagulation and bleeding disorders is often done. Close et al[8] has shown the routine use of PT and PTT is not useful in predicting postoperative bleeding in patients who do not have a family history of bleeding disorders. Other investigators think the PT and PTT are important to help identify patients who might have an increased risk of postoperative bleeding.[6] None of the patients in this study who developed postoperative hemorrhage had an abnormal PT or PTT. The routine ordering of PT and PTT is probably not justified in patients who do not have a questionable history of prolonged bleeding or have a history of bleeding disorder. Children whose families refuse blood transfusions for religious or personal reasons probably should be screened with PT and PTT for medical-legal documentation in the pre-operative evaluation. Patients who have a prolonged PT or PTT are referred for additional evaluation prior to surgery. The trend toward outpatient surgery has resulted in virtually all patients having either outpatient or outpatient surgery with overnight observation. Patients under the age of five are routinely kept for observation. Children older than 5 who have early morning surgery can be discharged is oral intake is adequate and pain is well-controlled with oral analgesics, providing that adequate parental support is available and patients have ready access to medical facilities. Inclimate weather, lack of adequate reliable transportation, lack of telephone, and limited access for emergency care support the need for an observation period.

Conclusion

A retrospective study of 756 patients was done to determine post-tonsillectomy hemorrhage. Seven of 756 (.93% required return to the operating room for general anesthesia to control hemorrhage. This finding compares to other reviews of post-tonsillectomy hemorrhage ranging from 0% to 20%.[9-12]

This study demonstrated both a seasonal predilection (summer) and gender predilection (female) in patients who required return to surgery for control of hemorrhage. This has not been previously reported.

The PT and PTT were normal in all patients who required control of hemorrhage. The routine use of PT and PTT to predict a propensity toward postoperative hemorrhage is not justified based upon this review.

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Presented to the Missouri Chapter of American College of Surgeons, Lake of the Ozarks, Missouri, June 16-18, 1995.

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Are Serum Levels of Vancomycin Useful in The First Week of Therapy?

E. Goldstein, MD, W. R. Bartholomew, PhD, M. K. Vickers, RPh, and T. Parr, PharmD

Controversy exists regarding the need to monitor serum concentrations of vancomycin with some investigators recommending measurement of peak and trough concentrations in the first week of therapy and regularly thereafter, whereas others contend that empiric dosing produces safe and effective drug concentrations so that testing is unnecessary. Since vancomycin concentrations are measured, routinely in our hospital in the first week of therapy, we conducted a 12 month study to assess their clinical value in patients who were treated when gram positive cocci were detected in blood culture smears. One-hundred-five patients had gram positive cocci on blood culture smears. These bacteria were pathogens in 15 patients with *Staphylococcus aureus* and in 18 with coagulase negative staphylococci based on microbiologic criteria and a chart review confirming their clinical significance. Ten patients with *S. aureus* and 8 patients with coagulase negative staphylococci that were pathogens and 10 patients with coagulase negative staphylococci that were contaminants were treated with vancomycin. Serum peak and trough concentrations of vancomycin obtained within the first 5 days of therapy in these 28 patients were 14 to 40 µg/ml and 4.8 to 20 µg/ml. These concentrations were much above the MIC's of the microorganisms (< 4 µg/ml). Five patients had increases of serum creatinine of more than 0.6 mg% and in each patient the increases were attributable to other causes - shock, heart failure, and preexisting renal failure. Fifty five peak and trough concentrations 19 of which were drawn in patients with contaminated cultures were measured at a cost of $2,475. These results substantiate the predictability of vancomycin dosing, the uniform susceptibility of gram positive blood culture isolates and the lack of vancomycin induced nephrotoxicity in patients treated empirically for one week. Thus, measuring serum concentrations of vancomycin in patients with a positive blood culture smear in the first week of therapy is an unnecessary and costly expense.

Current recommendations for monitoring vancomycin therapy are to obtain serum peak and trough concentrations at the beginning of therapy[1] or following the third or fourth dose of drug[2] and to continue monitoring antibiotic concentrations at subsequent intervals.[1-3] These recommendations which are intended to ensure effective antibiotic concentrations while minimizing toxicity have been challenged recently, as unnecessary on the basis of literature reviews.[4,5] As part of our ongoing quality assurance program, we conducted a 12 month study of vancomycin therapy from December 1991 to December 1992 in patients who had gram positive cocci on blood culture smears to determine the clinical and financial significance of measuring serum vancomycin concentrations in the initial week of therapy. We are reporting these data because they bear directly on the clinical controversy regarding the value of measuring serum vancomycin levels.

Material and Methods

One-hundred-five patients who were on the medical wards or intensive care unit from December 1991 to December 1992 and had gram positive cocci on blood culture smears were entered into this study. The smears were from blood culture sets in which an aerobic (6A) and an anaerobic Bactec bottle (7A) were inoculated with 3-5 ml of blood. Two or more blood cultures were drawn from a peripheral vein for all patients. Bacteremia was considered present if two or more blood cultures drawn within 24 hours grew the same microorganism in pure culture.[6] The charts of patients who had gram positive cocci on a blood culture smear were reviewed for vancomycin usage usually one gram every twelve hours, length of therapy, time of measurement of serum vancomycin concentrations, and the clinical significance of the isolate.

Results

One thousand-seven hundred-eleven blood culture sets were drawn during the one year study period. Bacteria were cultured from 220 sets yielding a 12.9% rate of positivity. Gram positive cocci grew in 163 blood culture sets from 105 patients. Table 1 shows that coagulase negative staphylococci were the most frequently cultured gram positive coccus being present in 88 culture sets from 63 patients. *Staphylococcus aureus* which was found in 33 culture sets from 15 patients was the second most common isolate. All staphylococci were sensitive to less than 4.0 μg/ml. The remaining positive cultures grew *Streptococcus pneumoniae* in 9 patients, enterococci in 12 patients, other streptococci in 5 patients and a micrococcus in one patient.

TABLE 1
Blood Cultures Containing Gram Positive Cocci

Isolate	Patients	Culture Sets
Coagulase negative Staphylococcus	63*	88
Staphylococcus aureus	15	33
Oxacillin resistant		25
Oxacillin sensitive		8
Streptococcus pneumoniae	9	17
Enterococci	12	17
Other Streptococci	5	7
Micrococci	1	1
Total	105	163

*Four of the patient's cultures also contained *Staphylococcus aureus*

Coagulase negative staphylococci were a true cause for bacteremia in 18 of the 63 patients based on the criteria that the microorganism was present in two or more blood cultures and a potential site of staphylococcal infection was found in the chart review of these patients. Eight of these 18 patients were treated from 2 to 20 days with vancomycin. Peak and trough levels of vancomycin were obtained within 120 hours of initiation of vancomycin therapy in the 8 patients. One patient who had hypotension died after receiving two days of vancomycin therapy. Another patient who had an infected ventriculoperitoneal shunt replaced received 4 days of vancomycin. The remaining 6 patients were treated with vancomycin for 5 or more days. None of the seven patients surviving patients developed an increase in serum creatinine concentration. The initial peak and trough serum concentrations of vancomycin were 17 to 29 μg/ml and 7 to 12 μg/ml for the 8 patients. Thus in this group vancomycin therapy did not provoke renal dysfunction and measurement of serum vancomycin concentrations within the first few days of therapy documented predictably useful levels of vancomycin.

Ten patients whose blood cultures were contaminated with coagulase negative staphylococci based on the aforementioned criteria were treated for periods of 2 to 21 days with vancomycin. Peak and trough serum concentrations of vancomycin were measured within 120 hours of initiating vancomycin in 9 of the 10 patients. The tenth patient who improved had a vancomycin level drawn near the end of a three week course of therapy and is not considered further. The peak serum concentra-

Continued on page 598

Continued from page 597

tions varied from 14 to 40 µg/ml and the trough concentrations varied from 5 to 19 µg/ml for the 10 patients in whom vancomycin concentrations were obtained within 120 hours of initiating therapy. Nine of the 10 improved and none had increases in serum creatinine of greater than 0.6 mg%. The tenth patient who died on the fourth day of vancomycin therapy had an increase in serum creatinine from 3.5 to 5.5 mg%. Since this patient had chronic renal failure and was also receiving gentamicin it is difficult to attribute the nephrotoxicity to vancomycin. Vancomycin was discontinued in 7 patients when the gram positive coccus was shown to be a contaminant. Three patients continued to be treated empirically. Thus treatment with vancomycin did not provoke renal failure and the levels of drug were in the therapeutic range in these unnecessarily treated patients. Nineteen serum concentrations (one patient did not have a trough concentration) were measured in the first week of therapy in these patients who were treated unnecessarily.

The *Staphylococcus aureus* isolates were a true cause for bacteremia based on the laboratory criteria and clinical review in 14 of 15 patients with positive blood cultures. Six of the 14 received vancomycin for 8 or more days, two were treated for four days, two died after two days of treatment, and four were not treated with vancomycin. Vancomycin concentrations were measured within 120 hours of initiating therapy in the 10 patients who received the drug. The peak serum concentrations varied from 14 to 35 µg/ml and the trough concentrations varied from 9.0 to 20 µg/ml. Two patients one of whom died had increases in serum creatinine concentrations of 0.8 and 2.2 mg%. The increases were attributed to hypotension in one patient and preexisting chronic renal failure in the second patient.

Vancomycin levels were not obtained in the 9 patients with pneumococcal bacteremia. These patients were treated with penicillin or cefazolin as soon as the microbiologic diagnosis was made. Similarly, vancomycin was used in only one of twelve patients with enterococcal bacteremia; these patients were treated with ampicillin or piperacillin and gentamicin. The one patient who was treated with vancomycin did not have serum concentrations drawn in the first week of therapy. This patient was treated successfully and he did not develop an increase in serum creatinine. The patient with the *Streptococcus mitis* infection was treated with penicillin. The expenses incurred in measuring 55 serum peak and trough concentrations of vancomycin within the first 120 hours of therapy was $2,475 assuming a charge of $45.00 per vancomycin concentration which was the cost at the University of Kansas Medical Center in 1993. The KCVAH does not have a hospital charge for infusing vancomycin. The $2,475 expense is composed of $855.00 for 19 measurements in 10 patients who were treated on the basis of a contaminated coagulase negative staphylococcal culture, $720.00 for 16 measurements in 8 patients who were treated for a coagulase negative staphylococcal bacteremia, and $900.00 for 20 measurements in patients who were treated for a *Staphylococcus aureus* bacteremia.

Discussion

For many years measuring serum peak and trough levels of vancomycin soon after the initiation of therapy and at regular intervals thereafter has been accepted clinical practice.[1,2] Recently, Cantú[4] and Freeman[5] and their coinvestigators have challenged these recommendations on the basis of literature reviews showing that such monitoring increased the cost without improving the safety or effectiveness of therapy. Our data which were obtained prior to publication of these reviews provides investigational support for their conclusions in so far as measurements of vancomycin concentrations in the first week of therapy are concerned. According to our data standard dosing of vancomycin results in serum peak and trough concentrations that are predictably above the MIC of 1 to 5 µg/ml or less that is required to treat gram positive pathogens,[5,7] nephrotoxicity attributable to vancomycin did not occur, and worthless results are often obtained when the gram positive coccus detected on a blood smear is shown to be a contaminant.

The peak serum concentrations which were measured in the 28 patients who were treated for gram positive cocci (coagulase negative staphylococci 18, *S. aureus* 10) in their blood cultures varied from 14 to 40 µg/ml and the comparable trough concentrations varied from 4.8 to 20 µg/ml. These levels are much above the MIC's for these microorganisms which did not exceed 4 μg/ml. Thus, as predicted standard 1.0 gram twice a day dosing achieved therapeutic serum concentrations of vancomycin.

Vancomycin did not appear to provoke nephrotoxicity in our patients. Serum creatinine concentrations remained within the normal range or increased less than 0.5 mg% in 23 patients. Five patients developed increases of more than 0.6mg% in their serum creatinine concentrations during the course of therapy. Four died within the first four days of receiving vancomycin and the creatinine increases were attributed to terminal heart failure and shock. A fifth patient had a transient increase of 0.8 mg% following hypotension due to *S. aureus* septicemia. This patient continued to be treated with vancomycin and his serum creatinine concentration returned to normal.

An important finding in our study is the frequency of unnecessary measurements of serum vancomycin concentrations in patients who are empirically treated for blood cultures containing gram positive cocci. Approximately one-third of these cultures were proven to be coagulase negative staphylococcal contaminants. Measuring vancomycin concentrations in these patients is a significant expense, $855.00, that can be avoided by waiting until the validity of the bacteremia is confirmed. It should be noted that our blood culture contamination rate of 3.6% is slightly increased when compared to the 2.5% rate observed at other hospitals[8] and that coagulase negative staphylococci are the most frequent cause of falsely positive blood cultures with rates of false positivity as high as 95.7%.[9] Therefore, regardless of whether one considers monitoring of vancomycin concentrations a worthwhile practice, measurements during the first week of therapy, as previously recommended are unlikely to be clinically helpful and in many patients result in unnecessary expense.

Recent studies indicate that measurements at later time periods in patients who have normal renal function are also unnecessary, except for a few clinical settings.[10] These settings apply to patients who are receiving prolonged courses of vancomycin and an aminoglycoside, as vancomycin may augment the nephrotoxicity of the aminoglycoside and detection of elevated trough levels would alert the clinician to the need for dose adjustments.[4,10] Anephric patients who are receiving dialysis are another group in whom measurements of vancomycin levels might be beneficial in detecting subtherapeutic concentrations of drug.[10] Patients with rapidly changing renal function are a third group in whom serum measurements would be helpful in adjusting therapy to ensure adequate but not excessive levels of drug.[10] Except for these subsets of patients, we do not recommend obtaining vancomycin levels.

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Acknowlegment

The authors thank Ms. Kathy Herriott and Stephen Glinski for their help with this study.

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Historical Record

100 Years Ago

A paper presented at the 38th Annual Meeting of the Missouri State Medical Association held in the opera house, Hannibal, Missouri, May 21, 1895.

Some Surgical Sins *(excerpt)*

By Emory Lanphear, MD, PhD, St. Louis, Missouri

Eighth Sin - KEEPING PATIENTS TOO LONG UNDER CHLOROFORM.

'Twas the ambition of surgeons prior to 1846 to operate rapidly; he who could most quickly perform an operation was rated the best surgeon; in celerity was success and reputation. But with the introduction of anaesthesia the other extreme became more popular until today the whole city of New York does not contain a half dozen operators who insist upon speedy work even in the abdomen. Many indeed say: "It does not matter how long the belly is open if one is clean and the room is warm." Fatal error. Nowhere in surgery is haste more necessary than in abdominal and pelvic work; the man who can most quickly open the abdomen, do his work rapidly, yet well, and close his wound with least delay is the one who will have the best mortality rate, and in spite of the fact that he does operations that the slow man would not dare to attempt. The advice of a great operator anent ruptured tubal pregnancy is apropos: "Get into the belly as soon as you can, but for heaven's sake *get out*."

Beside the danger of long-continued exposure to surfaces liable to be infected, with consequent disastrous results, there is the greater one from the anaesthetic itself. We have been wont to ignore this; with immunity from pain and perfect quietness, we forget that at every operation, however small, in which chloroform or ether is given, our patient is literally carried to "the valley and the shadow of death" and though he oft apparently returns in safety, in a few hours may pass beyond. "Shock" is usually due to (1) excessive hemorrhage; or (2) prolonged anaesthesia, and many a death certificate has been filled in with "shock" when the real cause of death was too much choloform or ether. Nor is this danger all. Even though the patient recover from the immediate influence, if he has been kept too long in complete narcosis the remote effects upon the nervous system may be profound and lasting. As Wheaton says: "There is little doubt that anaesthesia is responsible for this adding of weeks, months, and perhaps years, of suffering and woe and that many a tortured nervous system lives today to testify to the truthfulness of this statement."

In doing our operative work we should, therefore, ever bear in mind "*Αριστον μετρον.*" (Ariston metron - the golden mean - the middle course is best); not using undue haste at the expense of safety nor keeping our patient too long under the ever pernicious influence of the anaesthetic. Unwise speed is bad; "chronic surgery" is worse.

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6 & 7 - *St. Louis*: Advanced Trauma Life Support Provider/Provider Refresher Course. 16/9 credit hrs. Call Joyce Hope 314/577-8802.

6 & 7 - *Kansas*: Marital and Sex Therapy with Victims and Perpetrators of Sexual Abuse. 12 credit hrs. Call Menninger Continuing Education 1-800-288-7377.

6 & 7 - *Columbia*: 5th Annual Caring for the Frail Elderly Conference: What's New in Long Term Care. 10.4 credit hrs. Call 314/882-0366.

6 thru 17 - *Prague, Vienna and Budapest*: Allergy Abroad '95. 21 credit hrs. Contact 314/362-6893.

7 & 8 - *Washington, DC*: Sixth Biannual Gastroenterology Board Review Course.

10 thru 12 - *St. Louis*: Surgical Approaches to the Skull Base. 24 credit hrs. Call 314/577-8167.

10 thru 13 - *Hawaii*: Update on Current Treatment in Clinical Medicine. Call Kim McChesney 816/932-5140.

10 thru 13 - *Hawaii*: Pediatric for the Practitioner. 20 credit hrs. Call Kim McChesney 816/932-5140.

8 thru 12 - *Virginia*: Medical Oncology Board Review Course.

11 thru 14 - *Kansas*: Group Psychotherapy: An Experiential Workshop. 19 credit hrs. Call Menninger Continuing Education 1-800-288-7377.

13 - *St. Louis*: Midwest Clinical Molecular Cardiology. Call St. Louis University 1-800-553-2712.

13 - *St. Louis*: Menopause & Beyond: Women's Health Issues. 6 credit hrs. Call 314/577-8167.

13 & 14 - *Springfield*: Pediatric Advanced Life Support. 15 credit hrs. Call Julie Hartley 417/885-6111.

13 thru 15 - *St. Louis*: TMJ Workshop. Call St. Louis University 1-800-553-2712.

14 - *St. Louis*: Third Annual ECT Conference. Call St. Louis University 1-800-553-2712.

15 thru 18 -*Arizona*: 17th Annual Meeting of the Society for Medical Decision Making. Call Marla Gorrick 202/994-4285.

16 thru 19 - *Hawaii*: Primary Care 1995. Call Kim McChesney 816/932-5140.

17 thru 19 - *St. Louis*: Color-Flow Doppler Echocardiography. 20 credit hrs. Call Dianne Reid 314/577-8897.

19 thru 21 - *Florida*: Workshop on Stress Echocardiography. 14 credit hrs. Call Beth Paul 816/932-5119.

20 - *St. Louis*: The Tenth Annual John V. King Family Medicine Symposium. Call 314-569-6290.

20 - *St. Louis*: Founders Day Program. Call St. Louis University 1-800-553-2712.

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in **Missouri Medicine**. *Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.*

20 & 21 - *Nashville, TN*: **Quality and Utilization Management Conference.** Call Jennifer Fincken 202/736-3822.

22 thru 25 - *Nashville, TN*: **Annual Managed Care Conference and Exhibition.** Call Jennifer Fincken 202/736-3822.

23 - *Nashville, TN*: **Medical Directors Roundtable.** Call Jennifer Fincken 202/736-3822.

23 & 24 - *St. Louis*: **6th Annual Neuroscience Symposium.** Call St. Louis University 1-800-553-2712.

27 & 28 - *St. Louis*: **Neuroendoscopy.** Call St. Louis University 1-800-553-2712.

27 & 28 - *St. Louis*: **Neurosurgical Endoscopy.** 14 credit hrs. Call Salomao Segal, MD 314/535-4000.

27 & 28 - *St. Louis*: **Neurosurgical Endoscopy.** 14 credit hrs. Call 314/577-8167.

27 & 28 - *St. Louis*: **23rd Annual Kilo Diabetes Symposium.** 13.5 credit hrs. Call Beverly Cantoni, Maureen Whitsett or Anne Barkofske 314/434-6500.

November

1 - *Springfield*: **Neonatal Resuscitation Course.** 6.75 credit hrs. Call Julie Hartley 417/885-6111.

2 - *St. Louis*: **Clinical Care Approach to HIV Disease.** 6.75 credit hrs. Call Susan Wightman 314/362-2418 or 1-800-432-0448.

2 thru 4 - *Topeka, Kansas*: **Changing Times, Evolving Issues: New Ideasa About Women's Development.** 15 credit hours. Call 1-800-288-7377.

3 - *St. Louis*: **Allergy of the Upper Airway/LRC.** Call St. Louis University 1-800-553-2712.

3 & 4 - *St. Louis*: **Techniques for Cervical Spine Fixation.** Call Salomao Segal, MD 314/535-4000.

8 - *St. Louis*: **Updates in Neurology.** Call 314/569-6290.

9 & 10 - *St. Louis*: **21st Annual Update on Obstetrics and Gynecology.** Call 314/362-6893 or 1-800-325-9862.

10 & 11 - *Topeka, Kansas*: **Children & Trauma: Psychological and Spiritual Aspects of Understanding and Treatment.** 12 credit hours. Call 1-800-288-7377.

15 thru 17 - *St. Louis*: **Pediatric Advanced Cardiac and Trauma Support for Life. Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel 314/577-5385.

10 & 11 - *St. Louis*: **Cervical Spine for Chiropractors.** Call Salomao Segal, MD 314/535-4000.

13 - *St. Louis*: **Broad Exposure - Radiation in American Popular Culture.** Call 314/362-7130.

16 - *St. Louis*: **Pediatric Neurology Update.** Call St. Louis University 1-800-553-2712.

17 thru 19 - *St. Louis*: **Practical Spine Anatomy.** Call Salomao Segal 314/535-4000.

17 thru 19 - *St.Louis*: **Microsurgical and Endoscopic Anatomy of the Spine.** Call Salomao Segal, MD 314/535-4000.

18 & 19 - *Springfield*: **Pediatric Advanced Life Support Provider Course.** 17.4 credit hrs. Call Maryann Jeter 1-800-835-5201.

10 thru 12 - *Branson*: **MAFP Fall Conference.** 10 credit hrs.

December

1 - *St. Louis*: **Women's Healthcare Issues.** Call 314/362-6893.

1 & 2 - *Kansas City*: **13th Annual Basic Fetal Heart Rate Monitoring & 6th Advanced Fetal Heart Rate Monitoring Seminars.** Call Carol Osborne 816/932-3737.

2 - *St. Louis*: **Shoulder for Physical Therapists.** Call Salomao Segal, MD 314/535-4000.

5 - *St. Louis*: **Pediatric Advanced Life Support Renewal Class.** 7 credit hrs. Call Mary Beth Foerstel 314/577-5385.

7 & 8 - *Kansas City*: **25th Annual Presentation of The Heart - 1995.** Call Beth Paul 816/932-2301.

8 - *St. Louis*: **Craniofacial Workshop.** Call St. Louis University 1-800-553-2712.

8 & 9 - *St. Louis*: **Craniofacial Surgery and Transfacial Approaches to the Skull Base.** Call Salomao Segal, MD 314/535-4000.

8 thru 10 - *St. Louis*: **Craniofacial and Transfacial Approaches to the Skull Base.** 24 credit hours. Call Patrice Lauria 314/535-4000.

9 - *St. Louis*: **Cardiology Seminar.** Call 314/362-6893.

9 - *St. Louis*: **Contemporary Management of Myocardial Infarction.** Call 314/362-6893.

9 - *Cape Girardeau*: **Health Care Symposium.** Call Lois Kasten 314/334-5691.

11 - *St. Louis*: **Ultrasound PACS: Are We There Yet?** Call 314/362-7130.

15 & 16 - *St. Louis*: **Correlative Neuroanatomy.** Call Salomao Segal, MD 314/535-4000.

January 1996

8 - *St. Louis*: **Imaging the Injured Spinal Cord.** Call 314/362-7130.

17 thru 21 - *Florida*: **21st Annual Meeting of the Alliance for CME.** Call Daniel Reichard 202/994-4285.

22 - *St. Louis*: **Neurosurgical Approaches to the Carotid Artery.** Call Salomao Segal, MD 314/535-4000.

22 thru 26 - *St. Louis*: **The Medicolegal Death Investigator Training Course.** 33 credit hrs. Call Mary Fran Ernst 314/522-6410, ext. 6509.

26 & 27 - *St. Louis*: **Techniques of Lumbar Decompression and Fixation.** 17 credit hrs. Call Salomao Segal, MD 314/535-4000.

February 1996

12 - *St. Louis*: **Controversial Aspects of the Regulation of Mammography.** Call 314/362-7130.

13 thru 15 - *St. Louis*: **Endoscopic Plastic Surgery.** Call Salomao Segal, MD 314/535-4000.

19 thru 23 - *Cancun, Mexico*: **Medicine for Primary Care.** 20 credit hrs. Call Gretchen Keefer 816/932-2012.

22 thru 24 - *Palm Beach, Florida*: **High Quality, Cost Effective Obstetric Care.** 18 credit hrs. Call Carol Osborne 816/932-3737.

March 1996

11 - *St. Louis:* **Technology Assessment, Outcomes Research, and Decision Making in Diagnostic Radiology.** Call 314/362-7130.

13 thru 15 - *St. Louis*: **4th Annual Refresher Course and Update in General Surgery.** Call 314/362-6893.

21 & 22 - *St. Louis*: **Clinical Pulmonary Update.** Call 314/362-6893.

25 thru 29 - *St. Louis*: **Spinal Fracture Fixation.** Call Salomao Segal, MD 314/535-4000.

30 - *St. Louis*: **Cardio-Pulmonary Bypass and Coagulation Deficiencies for Surgeons.** Call 314/362-6893.

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Journal of the Missouri State Medical Association

October 1995

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- MPCRF: Outcome Variations for BPH-TURP Patients
- Mortgage Payments: Prepay or Not?
- Otolaryngology Quiz #8
- Barrett's Esophagus: A Review
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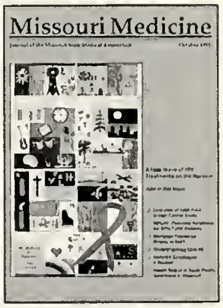
MISSOURI MEDICINE

VOLUME 92, NUMBER 10

Cover Story



Research Will Lead Us to a New Wave of Treatments for HIV Infection 638
David McKinsey, MD

On the Cover: An oil painting by Suzanne Haynes Sword, MD, of a representative panel of the AIDS Memorial Quilt. The quilt, now size of six football fields, recently visited Kansas City. In Dr. Sword's painting every letter of the alphabet is included so that anyone can relate the initials of someone they know. She has also included symbols of the arts, professions, research, music, military, sports, vacations, religion, children and women. "Jeffrey" (upper right) is a play about relationships with people with AIDS, it be performed in Kansas City this Fall.

Editor's Desk

Minding Your Manners - *J. Regan Thomas, MD, Editor* 613

President's Page

One-on-One Cost Accounting - *Frederick Hahn, MD, MSMA President* 614

Financial Advice

To Prepay or not prepay? That is the question - *Matthew Taheri* 616

Otolaryngology Quiz #8 621
David Parsons, MD and Gregory J. Roberts, MD

Perspectives

Fat Chance - *John A. Carrier, MD* 618

The New Social Engineers of the 90s: Federal Trade Commission and Department of Justice Anti-Trust Division - *Arthur Gale, MD* 628

Medical Legal Issue of the Month

Overview of 1995 PIAA Breast Cancer Study - *Andrew K. Bennett, JD* 624

MPCRF

Outcome Variations for BPH-TURP Patients 640
David Hardy, MD, Susan Elder, Janice Pirner, LPN, Brad Hegemann, MA, and Gary J. Fortune DO, MPH

Scientific Section

Barrett's Esophagus: A Review 645
Devin R. Sawyer, MD, Walter E. Longo, MD, and Keith S. Naunheim, MD

Health Status of Asian Pacific Americans in Missouri 648
Ik-Whan G. Kwon, PhD and Mueun Bae, PhD

Membership Notes 634
CME Calendar 654
Contributors' Information 644
Classified Listings 656

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $60.00. Annual subscription for members is included in the annual membership dues. Single copies are $8.00 and the per copy cost of the annual August Directory is $40.00.

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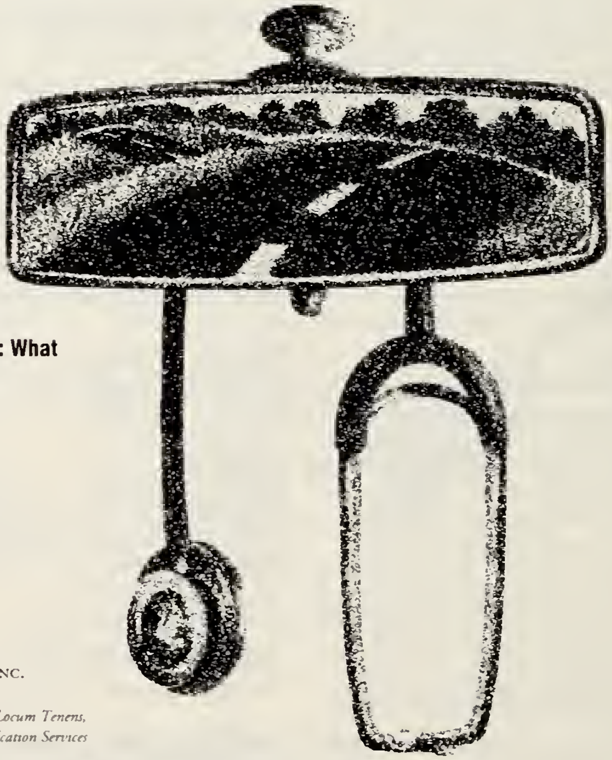

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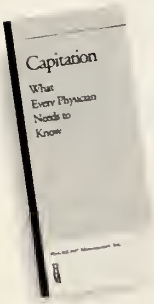

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Minding Your Manners

J. Regan Thomas, MD, Editor

Remember the rules they told you in medical school for a successful practice? The answer was the three A's: Availability, Affability, and Ability. As true as that triad may have been, when it comes to avoiding medical liability lawsuits the affability component may be the most important trait. A study reported in the March 1995 issue of *JAMA* shows that doctors who develop better relationships with their patients are less likely to be sued.

That doesn't seem too surprising. What is surprising is that many physicians don't seem to figure it out. Doctors who give the impression of arrogance, rudeness, or disinterest will more likely have patients who seek out litigation if complications occur. Patients who feel that during their visits with their physicians they were rushed or ignored or that they could not get appropriate answers to their questions, were more likely to sue.

Nearly 1,000 women who had never sued for malpractice were interviewed in the Vanderbilt University study. The group of physicians who elicited the most complaints from these patients were the ones who were also the most likely to be sued. In fact, the group sued most often had twice as many complaints about their lack of rapport and attitude. The researchers examined medical records for insights as to differing practice habits or signs of poor competence. No difference in quality of care could be identified. It appears the "bedside manner" is a matter not to be overlooked.

I have an acquaintance who falls into this category. He is bright, well-trained, and prides himself on how many patients he can see in an afternoon. He frequently complains about how ungrateful patients are these days. Are they really ungrateful, or is there simply poor rapport and lack of communication. I know from his description of patient visits that he spends only a few minutes with each person and then rushes to the next room. I'm sure in his mind he is making sound medical judgements on their behalf. However, I'm also sure that many of his patients feel rushed or that they did not have their questions answered. My friend would likely argue that he is simply being efficient, or perhaps it's the only way to make a living in an era of contractual write-offs, poor reimbursement, and bizarre "usual and customary" fee schedules. True enough, but the issue here is patient perception. The patient who perceives he or she is being slighted is more likely to sue for medical liability.

The answer of course is one of balance. Remain efficient and effective while cultivating the "affability" component of the three A's. Patients usually understand that their doctor is busy and other patients are also waiting to be seen. But they still want to have their questions answered, to feel as though there is genuine concern about their problems, and that they are being treated courteously.

All of us know someone who is the antithesis of this description but has been named in a lawsuit. This continues to be a litigious society and there seems to be no end in sight. Every year more attorneys are pumped into our system and they all want to earn a living. This Vanderbilt study, while not likely to protect you from these suits, does give an important clue to minimizing your risk and avoiding suits.

Most physicians at first glance say that all this is simply intuitive. On further contemplation however, we all know someone who falls into the category. Some will perhaps see a bit of themselves in the description. I hope they will take steps to change. The three A's are now being challenged by changes in the health care environment. "Ability" sometimes seems to be becoming a more and more distant third place. Availability now more often means: "are you a member of my plan?" Nonetheless, "affability" will also serve patient and physician well. It's good medical practice ... it's common courtesy. MoMed

One-on-One Cost Accounting

Frederick Hahn, MD, MSMA President

Shortly after coming to the Kansas City area to practice in 1970, a friend of ours commented, "I just got out of the hospital yesterday."

"You were in the hospital?" I exclaimed. To my knowledge he was near 40 years old and appeared to be in good health.

"I was in for tests," he explained. "I had my annual physical and my insurance pays for all of it if I am in the hospital."

So it all began

Cost was not a deterrent at that point, nor for many years to follow. Retrospectively, the insurance companies "chose" their margin of profit (and a handsome one too), simply added that amount to the cost and charged the total to the holder of the policy contract.

Reality Lost

Health insurance became the "right" of the unionized work place. Private non-union enterprise was forced to follow suit to avoid the threat of unionization.

The standard question in the physician's office was no longer, "What will this cost me Doc?" but "This is covered by my insurance, isn't it?"

Cat and Mouse

A couple decades passed with we physicians shamelessly pursuing what the insurance companies would allow (as the billing and collection was primarily accomplished directly with the insurance company.)

Initially, the insurance companies seemed to care less. Their profit margin was even more shamelessly established and this merely added to the cost which in turn was passed on to the employers. This game of "cat and mouse" consisted of finding out what the insurance companies considered "reasonable and customary." As time passed, it became more customary and less reasonable.

RBRVS

In 1990, HCFA gave birth to the Resource Based Relative Value Scale. This was a Harvard effort to bring reason to skyrocketing health care costs which were now distressing employers, placing indirect stress on the insurance companies and bankrupting Medicare.

Reason and Value Gone

Recently, an elderly patient banged his foot in the tub. When pain persisted, his primary care physician (PCP) acquired an x-ray. The interpretation was a non-displace fracture of his metatarsal. He was referred to a "bone doctor."

With his shoe and sock off and the x-ray report in the chart, the doctor visit began. A glance at the foot without touching, a summons to the nurse for a hard-soled, canvas topped fracture shoe and instructions to wear this for a number of weeks and the visit ended.

In those fleeting 3-5 minutes, a list of charges was established:

$ 62.00	for Focused Office Visit.
19.00	for the special shoe.
237.00	for Fracture Management.
$318.00	Total

Most patients would barely look at the bill or leave assuming that Medicare and tie-in insurance "will cover it" (in reality, they will probably pay no more than 50-60%).

For patients who approach the system with some degree of suspicion, charges such as those above made without further explanation reduce that patient to significantly less than a physician advocate!

Point

The physician did not slow down to consider or address the reasonableness of how that fee related to such a cursory visit.

The patient may be insulated from any sense of value for the service rendered. The part this bill played in the spiraling cost of health care could well have been immediately ignored by both the physician and the patient.

Expanded

The example, however, concerns but a 3-minute, $300 tab. I am afraid the same abandonment of value is also present for many major procedures with tabs of $30,000 to $50,000. Indeed, to this point we have only addressed physician fees.

Physician fees represent but a small fraction of the total health care dollar. Hospital, prosthetics, pharmaceutical and home health costs have all been distanced from both patient and physician awareness. Each facet has assumed its own system of financial abuse.

Now

Managed care now enters - identifying these many indiscretions, and proposing to reduce the *net cost* of health expenditure with the pretense of doing so while improving Quality Assurance. How can we not be deeply suspicious when we find that managed care is one of the hottest beds for speculative investment.

In Summary

In summary, it appears to me that one of the major feats, which we as physicians must address, is one-on-one cost accounting of that part of the health care dollar that involves us.

The AMA's suggestion of including a voucher system and/or Medical Savings Accounts may well be an important part of that formula. We can ill afford to continue being separated from our patients by either insurance companies or non-medically directed managed care organizations. MoMed

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Robert J. Swift, Jr.
Vice President and Trust Officer

To prepay or not prepay: That is the question

Matthew Taheri, Financial Planner

Many retired physicians have enjoyed substantial appreciation in the values of their homes over the years. However, property values haven't appreciated nearly as quickly in the last few years and, sometimes have actually decreased. Still, many physicians have a large amount of equity in their homes. Some will sell their homes and downsize to "retirement" homes in the same or a different locale during retirement. As a result, they may find themselves for the first time with the luxury of owning their homes without having those dreaded mortgage payments.

Older "baby boomer" physicians will be turning 50 in just a few years. They're beginning to think about having no mortgage payments as well. In fact, many are planning to have their mortgages paid off by the time they reach retirement, if not sooner. Some are simply adding a few dollars to their mortgage payments. Others are making a 13th monthly payment each year, and many are just making sporadic payments of principal.

The real question is, does prepayment make financial sense? The answer depends on what your goals are and, even then, the answer may not be definite.

How mortgage prepayment works

When you prepay a mortgage, you are actually making the principal payments at the end of the mortgage, not the current or next payment. That's why even if you prepay your mortgage, you can't skip mortgage payments. When you prepay, you're saving the interest on the principal, but because home interest is usually tax deductible, it's not your "net" savings.

If interest rates were to rise dramatically, then it might not make as much sense to prepay the mortgage. Why? Because you could earn more somewhere else. On the other hand, if interest rates decline, it probably makes more sense to prepay the mortgage. If your investment increases faster than the net interest rate on the mortgage, you'll be ahead of the game. Of course, there's no guarantee.

The general rule is this: The higher your mortgage rate and the lower your marginal tax bracket, the more sense it makes to prepay the mortgage.

You might want to consider refinancing the mortgage, if you have an old mortgage at a high interest rate, before you go about the process of prepaying. Generally, if the mortgage is more than halfway paid off, it makes less sense to prepay. Why? The early payments are primarily interest and very little principal. The latter payments are mostly principal and very little interest. Therefore, you're not saving as much. You may be better off investing the money elsewhere if you have less than 10 years to go on a 30-year mortgage or five years on a 15-year mortgage.

Consider your need for liquidity

Let's assume that you've decided that between taxes and mortgage rates you're better off prepaying the mortgage. What else must you consider? Obviously, you have to look at whether you have any discretionary income to "invest" into your home. If you do not have an adequate emergency and opportunity fund, then you may consider putting the money into a money market or savings account for greater liquidity.

If you haven't accumulated investment assets, you might consider putting the money into a mutual fund rather than your mortgage. Why? Again, the need for liquidity. Money deposited into a mortgage is much harder to get out, even if you have a home equity credit line. You also could consider the effect prepayment might have on your cash flow and lifestyle. What good does it do to have a whole bunch of equity in your home if you're cash poor and can't enjoy a reasonable lifestyle?

First things first

Before paying off the mortgage on your home, you should have paid off most of your other debts such as automobile, credit cards and personal notes. These debts generally have an interest rate higher than that of your mortgage, and the interest expense is usually not deductible. Therefore, if you are carrying balances on your credit cards, which might have an interest rate as high as 20 percent, pay those off first.

If you still feel you should prepay your mortgage, the way you prepay the mortgage can make a substantial difference. The time-honored tradition is to make larger payments than are required. Generally, any payments above the required payment are directed toward the principal. Sometimes the mortgage company will have a minimum amount, but typically it's $25 per month.

Another method is to make one extra payment each year. At some point during the year, you make a 13th payment. While this plan can cut your mortgage time by many years, it does require that you make a lump-sum payment, which is sometimes difficult.

An increasingly popular method is to go to a biweekly mortgage, where you pay every two weeks. Banks and mortgage companies initially resisted this approach because of the additional handling. Today, people are sometimes encouraged to use this type of program. The net effect is that you make one extra monthly payment, but you're doing it every two weeks, so it doesn't hurt quite as much as the lump-sum payment.

Find the right strategy for you

The growing trend by both today's retiring physicians and aging "baby boomer" physicians is to own their homes free and clear by the time they reach retirement. Unlike the current generation of retired physicians, the "baby boomer" physicians can't always rely on appreciating property values to help get them there. They'll have to do it on their own, and they'll have to have a disciplined approach.

Matthew Taheri is an Investment Advisor with InterSecurities Inc., Overland Park, KS. For comments or questions call (800) 201-3351.

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Fat Chance

John A. Carrier, MD - Ballwin, Missouri

In this present day frenzy and obsessions with obesity - "fat chance" you will be able to escape the overwhelming media and advertising coverage of this problem.

I'm certain some of the overweight people are offended and increasingly sensitive about all this commotion. However, they can take solace in the fact that some of us underweight characters were once in their group. I was shaken up one day in my early forties when a surgeon friend of mine look me straight in the eyes and said, "Dammit, John, are you just going to keep getting fatter and fatter?" From then on, I started cutting down on those big roast beef sandwiches followed by huge slices of chocolate cake with thick fudge icing. However, I still remember those nice guys that sliced the roast beef at that lunch counter in the old Pierce Building and the wonderful aroma as you walked in on a cold windy winter day. It was just a short walk from the VA Center where I saw patients every morning.

As for my surgeon friend he never gained weight. He was tall, wiry, and athletic. Only a few months ago in the AMA obituary listing I saw that he had died at the age of 96 in a Florida retirement community.

Upon reflecting about this matter I wondered what attitude we had about obesity back in the days when we were kids. There were always some fat kids in school with us - just seemed to make up the expected mix of children. Tall ones, short ones, skinny ones, redheads, blonds, black-haired youngsters comprised the population of a Springfield, Missouri public school. As I recall the overweight children were accepted very well. There were always the mean kids who would take aim on the fat boy one day, then lash out at the skinny red head the next day. Everybody had nicknames in those days so it wasn't unusual to label the heavy boy Fat or Fatso. One of my best friends in grade school was Fat O'Neil. He was a pleasant and happy boy; an outstanding Boy Scout with leadership qualities. He died at age 14 after a brief illness. Rumors had it that he had been bitten by a poison spider.

I remember many obese adults when I was growing up. Locally, there were many overweight policemen. We would joke about what fat-chance the cop would have catching a burglar on the run! One neighbor boy friend of mine often used the expression - "that guy has a gut on him like a cop."

Perhaps the police in those days were politically selected by overweight politicians who lived well and ate too much. Even in Washington DC the big-wheel politicians were incredibly big people. Most of us know the photos of Presidents Teddy Roosevelt and Taft, overweight but well dressed and neat.

During my medical school days I can't recall much time spent on weight problems or nutrition. During my junior year at the University of Tennessee in Memphis, we had one class in nutrition conducted by dear Miss Proudfit. I'm not certain of her qualifications. She could have been a dietician at the huge Baptist Hospital. Her class came after lunch hour and that was a bad time since Miss Proudfit talked in a soft monotone, which put most of us to sleep in short order.

That same year Dr. Cheyne was one of our lecturers in internal medicine. He seemed to combine his presentations - Diabetes and

Obesity. His difficulties with these patients were more with women than men. He said these women were like magicians. He claimed these gals at dinner would reach for one roll and palm three! He said that often he would go down to the drug store after office hours and find his lady patients hidden behind display cases eating ice-cream sundaes!

As we advanced through hospital training to early practice we started to learn more about cardiovascular problems, arteriosclerosis, cholesterol, hypertension and the associated risks with obesity and diabetes. In the office during the 1940s, overweight patients became a part of the practice of general and internal medicine. Most of this group were females. They were not so concerned with the risk problems as they were with looking better. They wanted to appear attractive in a certain dress or the swim wear at the beach. Some husbands of normal weight were making life miserable for their plump wives - not with clubs or fists, but with nasty wisecracks.

Treatment for these patients consisted of giving them a 1,000 calorie diet list taken from a stack of such sheets that some friendly drug receptionist had left along with boxes of amphetamine samples. So we had the diet pills and the diet sheets, the come-back-slip in three weeks. That was about it for our weight regime. As time went on it became clear that our nice little ladies were taking the pills for pep and energy and to heck with the weight loss! Pills kept the husband awake for night driving, and the teenagers were stealing samples to get high before they played "chicken" in their beat-up cars on the back roads down by the creek.

Soon we were hearing about Fat Clinics and Fat Farms. One woman told me she went to a clinic where the doctor not only gave her pep pills but also thyroid tablets and diuretic shots. She couldn't sleep, suffered electrolyte imbalance, and became hyperthyroid. She stopped this treatment, but after a few months sought help from a chiropractor who was using acupuncture. On the first visit she walked into a huge room where there were many large women leaning over examining tables with their bare bottoms exposed, waiting for the man to come by and properly place the acupuncture needle! She became frightened, ran out of the place before they placed her on the table. Six months later she came to me looking very much more slender and attractive. She had been to a surgeon who had stapled her stomach and left her only a tiny pouch. Then one day a friend of hers told me she was back in the hospital. She had eaten so much she stretched the little pouch and some of the staples broke loose.

A year or so after that she returned to my office - all the old pounds were back again. "What do you think we ought to do now, doc?," she asked.

My recommendation to her was to change jobs. She worked in a candy factory!

With all the health awareness, keeping fit programs, people running, using exercise machines, keeping their diets low in fat, cholesterol and sugars, why wouldn't we be seeing less and less obesity? In a news segment recently we were told there was an increasing number of overweight people. Maybe the people are just becoming tired of those dull and plain meals and rushing back to the heavy more tasty menus. Perhaps they have resigned to the fact that their troubles are genetic, so blame it on poor Grandma. I am beginning to think there is some familial connections. Repeatedly in restaurants I see mom and pop being seated at a large table with three or four children of various ages, all tremendously overweight, anxiously waiting to order their big meals, and pop asking what kind of beer the server is pushing that day.

To today's young medical practitioner I can say your practice will also have a good percentage of overweight patients. There will be many new ideas and treatment plans. "Fat chance" that you will have much better luck than we did during those Golden Years in Medicine! **MoMed**

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Otolaryngology Quiz #8

by David Parsons, MD and Gregory Roberts, MD
Division of Otolaryngology, University of Missouri - Columbia

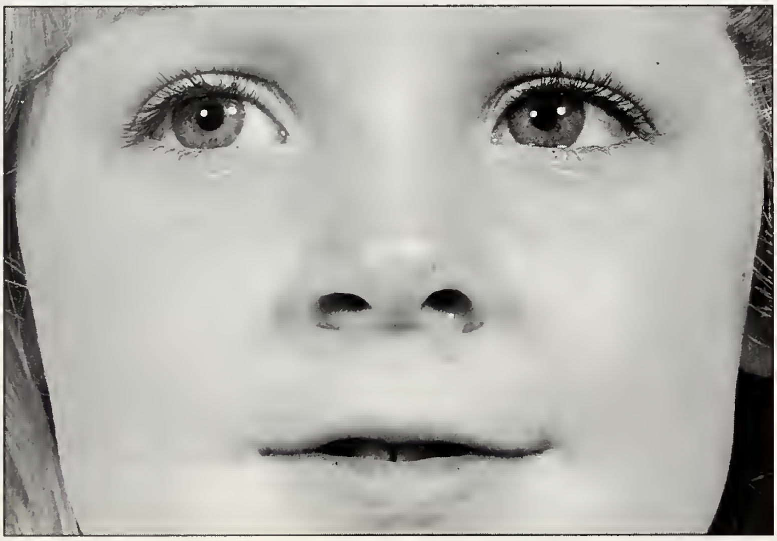

Figure 1

A four-year-old boy, in otherwise good health, presented to his pediatrician with a two-month history of left purulent, foul smelling nasal discharge, nasal obstruction, posterior nasal drainage, nocturnal cough and halitosis. (Fig 1) The child complained to his mother that his face hurt. His mother observed that her normally well-behaved child was more irritable and fussy than usual.

Physical examination of his left nasal passage revealed boggy inflamed nasal mucosa with obvious purulence, but visualization beyond the anterior end of the inferior turbinate and septum was not possible due to swelling. His right nasal passage was less involved. He had purulent posterior pharyngeal drainage. Neck examination revealed multiple enlarge tender lymph nodes that were more prominent on the left side.

Differential diagnosis includes the following but is most likely due to?

- **a. subacute bacterial sinusitis**
- **b. adenoiditis**
- **c. intranasal foreign body**
- **d. primary nasal tumor**
- **e. seasonal allergic rhinitis**

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER: c. intranasal foreign body

A child with a history of unilateral nasal obstruction and purulent foul smelling rhinorrhea should lead the clinician to suspect an intranasal foreign body. Symptoms are often identical to sinusitis as the foreign body produces nasal edema, obstruction of sinus ostia, and secondary sinusitis. This situation is common in psychotic and retarded individuals. Objects frequently placed in the nose include beads, rocks, small toys and food. Alkaline disc batteries placed in the nose have been reported to cause severe intranasal injury. In this child, a more thorough nasal examination after the administration of topical 0.05% oxymetazoline to the left nares revealed a black crusted object. A lateral skull radiograph verified the diagnosis of a coin in the left nare (Fig 2).

Once the diagnosis is made, simple removal of the foreign body may be possible with an instrument, such as a hemostat, after adequate vasoconstriction. The use of topical oxymetazoline is safe and its efficacy has been documented. Oxmetazoline administration leads to arteriolar vasoconstriction as well as decrease in nasal congestion through alpha adrenergic stimulation of the sympathetic nervous system. General anesthesia may be required when the object is large or difficult to remove as was the situation with this child. After removal of the foreign body, a thorough examination is performed to rule out additional objects and assess for resultant injury. The child should be placed on appropriate treatment for sinusitis.

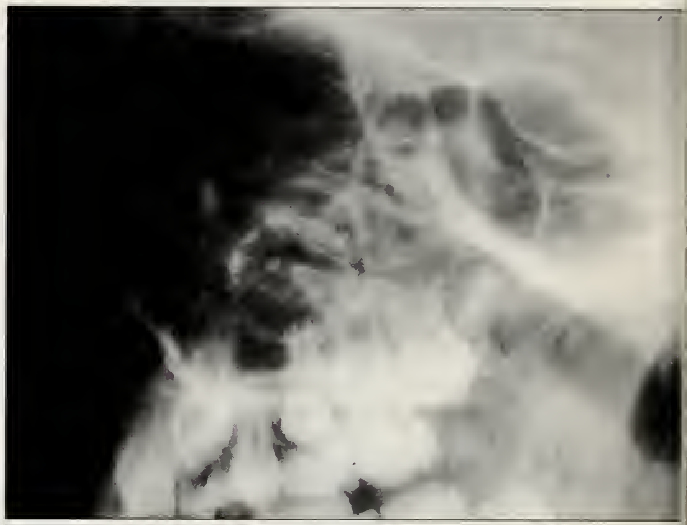

Figure 2

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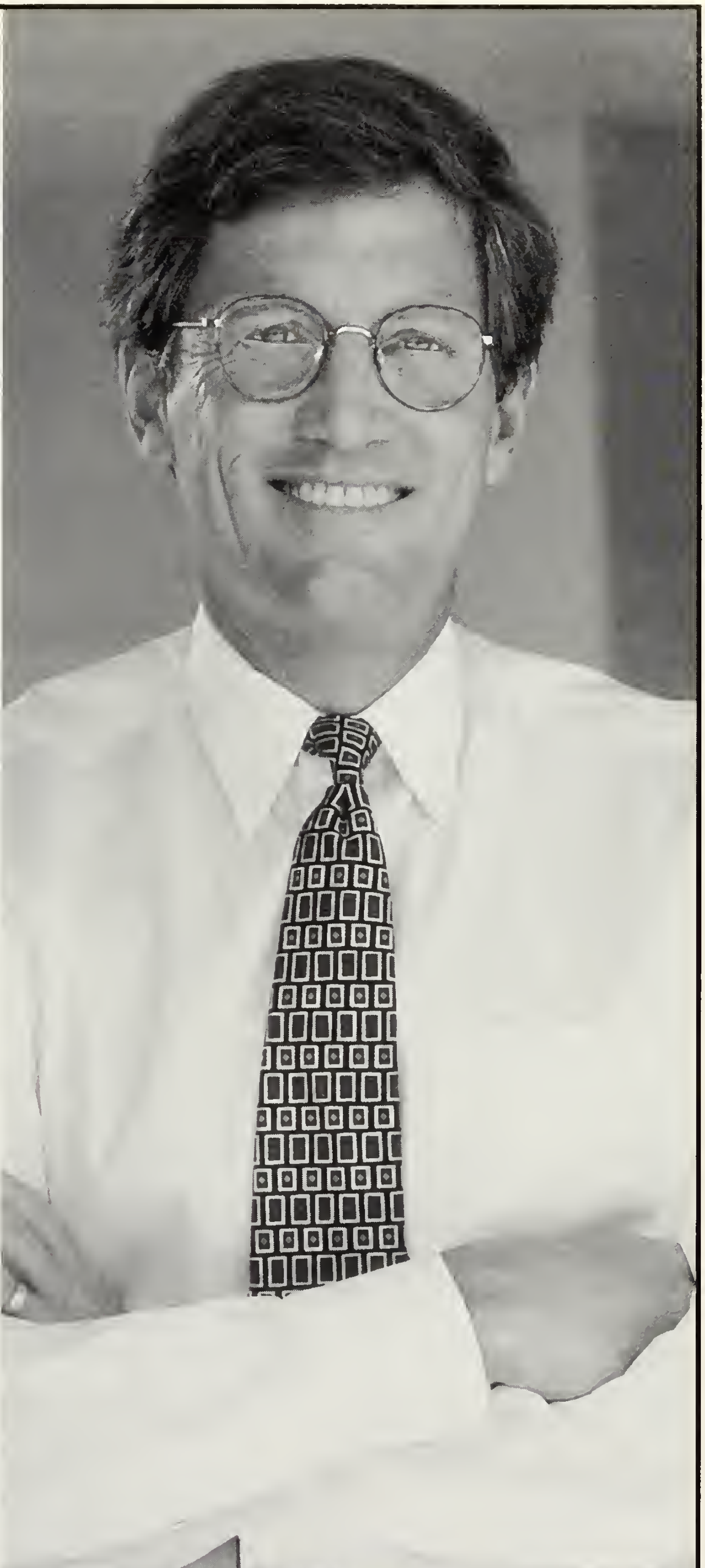

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Medical Legal Issue of the Month

Overview of 1995 PIAA Breast Cancer Study

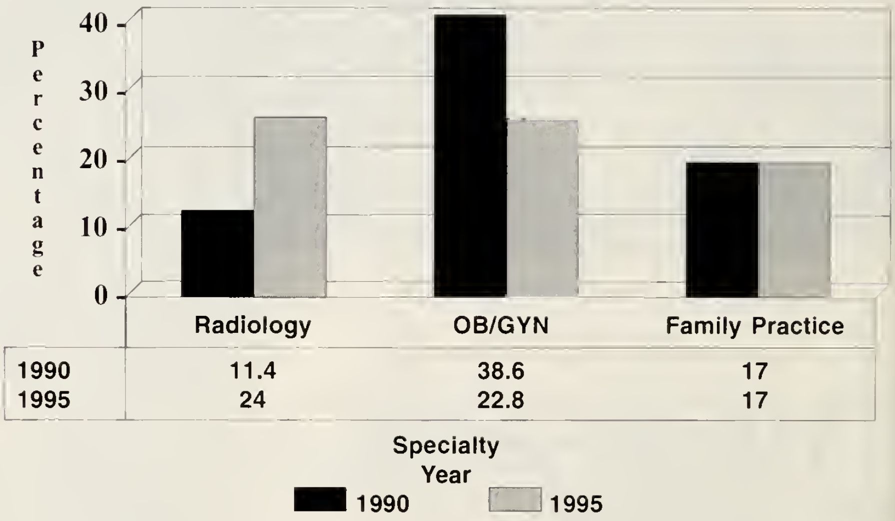
Andrew K. Bennett, JD

Breast cancer accounts for more medical malpractice claims and suits than any other single disease or condition, according to a Data Sharing Project of the Physician Insurers Association of America (PIAA). The report, released in June 1995, indicates that breast cancer-related claims and suits have led to more monies being paid out by malpractice insurance companies than any other single disease or condition, except those involving brain-damaged infants. The primary purposes of this study were to provide credible data to physicians to assist them in recognizing factors critical in diagnosing breast cancer at an early stage, and to provide loss prevention recommendations to physicians. This article will provide a summary of the facts and conclusions presented in the study, and will include the specific risk management recommendations contained therein. It should be noted that this is a nationwide study, not confined to Missouri.

Methodology

This research, referred to as the 1995 Breast Cancer Study, includes only closed claims involving a failure or delay in the diagnosis of breast cancer with an incident date no earlier than January 1985. Only those claims with an indemnity payment were included. Thirty-three PIAA member companies participated in the study, reporting a total of 487 paid cases which involved a delay in the diagnosis of breast cancer.

Figure 1. Specialties Named in Breast Cancer Cases with Indemnity Paid



(Based on 1995 PIAA Breast Cancer Study)

Findings

Patient Demographics: The range of claimant age was 23 to 84, with the average being 46 years. The median age was 45. Interestingly, 31% of all claimants were under the age of 40, and 37% of all indemnity paid was within this age group. Sixty-two percent of all claimants were under the age of 50, and 71% of all indemnity was paid for such claimants. The greater indemnity payments made to younger claimants were a result of potential future economic loss of the claimants, and life expectancy decreases for such patients. Fifty-four and nine tenths percent of the claimants were premenopausal, 9% were perimenopausal, and 36.1% were postmenopausal.

Clinical Findings: The lesion was discovered by the patient in 60% of the cases; a clinical physician first found evidence of suspicion of cancer in 20% of the cases; and the lesion was initially discovered on a screening mammogram or follow-up mammogram in 18% of the cases.

When the cancer was initially discovered, the most common presenting symptom was a painless mass, reported in 46.5% of the cases. A painful mass was reported in 16.1% of the cases. In 9.2% of the cases a painful or tender breast was reported, absent the presence of a mass. Patients were asymptomatic in 16.6% of the cases.

Reasons for delays in diagnosis: Failure of the physician to be impressed by physical findings was the most prevalent reason for a delay in diagnosis, being reported in 35% of all cases. Failure to follow up with a patient in a timely fashion was reported as the primary reason for delay in diagnosis in 31% of the cases. Other prevalent reasons attributed to the physician included a negative mammogram report (25.8%), a misread mammogram (22.7%), failure to do a proper biopsy (22.7%), and delay or failure to request a consult (15.5%). Obviously, some delays were attributable to more than one specific cause.

Radiologists, followed by Obstetricians, were the most frequently named defendants. Radiologists were the most frequent defendants, having been named in more than 24% of the cases (Fig 1). Obstetrician/gynecologists were named 23% of the time. Also named were family practitioners (17%), surgeons

Continued on page 626

Table 1
1995 PIAA Breast Cancer Study Risk Management Recommendations

All practitioners involved in the diagnosis of breast cancer
- Document all patient complaints relative to the breast.
- Document any family history of breast cancer.
- Document the results of any previous mammographic studies and follow up.
- Remember to follow up with other physician consultants regarding test results, etc.
- A palpable mass with a negative mammogram unequivocally requires a tissue diagnosis.
- Pregnancy should not cause delay of appropriate diagnostic studies.

Primary care physicians, including Obstetrician/Gynecologists
- Do not abandon diagnostic pursuit because you are unimpressed by the physical findings.
- Perform a thorough breast examination on each female patient as part of a physical examination, regardless of age or complaints.
- If a mass is palpated or suspected by physician, additional studies must be done to rule out malignancy.
- Be sure the patient understands the need for subsequent studies, and document this fact. Perform regular follow-up examinations on patients who present with complaints related to the breast.

Radiologists
- If a mammogram results in a film of poor technical quality, repeat the study.
- If the mammogram results are equivocal, recommend a repeat study, additional views, follow-up studies, other imaging modalities, etc., as appropriate.
- Be sure an adequate breast examination was performed and documented. Compare the results of the present study to all previous studies that were performed.
- Promptly report your findings to the referring physician; if the patient was self-referred, the results of the study should be mailed directly to her.
- If there is any suspicion of an abnormality, the patient should be so advised and told to consult promptly with her primary care physician or OB/GYN.
- If you are performing a screening mammogram on a self-referred patient, be sure to do a thorough breast exam, or advise the patient of the importance of a physical breast exam to complement the mammographic study. In cases in which the patient is self-referred, you are responsible for ensuring she receives proper follow-up visits.

Surgeons
- When a patient is referred, always perform an adequate examination and document your findings, especially when the referring physician's findings were unimpressive.
- When performing a biopsy, be sure the correct lesion is being removed, in both open and needle procedures. A specimen x-ray of the biopsy should always be obtained.
- Promptly report consultation and biopsy results to the referring physician.

Continued from page 625

(14%), internists (9%), and other specialists (5%). The study speculates that radiologists were named most frequently because of the increase in the number of premenopausal women who are seeking mammograms. Younger women's breast tissue is more dense, and therefore poses greater difficulty in detecting a lump through a mammogram.

An interesting comparison can be found between this study and a 1990 PIAA study. In 1990, a significantly higher percentage (38.6%) of breast cancer cases were filed against OB/GYNs. Only 11.4% of the cases in the 1990 PIAA study named radiologists as defendants (Fig 1).

Indemnity Paid: Indemnity payment was made on behalf of radiologists in 24.4% of the cases, as compared to 11.4% in the 1990 study (Fig 1). However, the average indemnity paid for radiologists was found to be $182,300, as compared to $203,000 in the 1990 study. In the 1995 study of payments made to claimants based on a delay in diagnosis of breast cancer, such payments were made on behalf of OB/GYNs in only 22.8% of the cases. This compares to 38.6% in the 1990 study (Fig 1). However, the average indemnity paid on behalf of OB/GYNs was 50% higher than radiologists according to this year's study.

Mammography: An alarming finding in the 1995 study was that mammogram results were reported as negative or equivocal in 80% of these cases, when, in fact, a lesion was present. False negatives and equivocal results were found to occur more frequently in females under 40 years of age. The study suggests that the large percentage of patients with either negative or equivocal results demonstrates the fact that a high index of suspicion and further testing may be warranted in diagnosing breast cancer. This was deemed to be of particular importance in younger women for the reasons previously discussed. The 1995 Breast Cancer Study questions the wisdom of relying on mammography as the only tool in diagnosing breast cancer. It suggests that follow-up studies may be critical, especially in cases of an equivocal mammogram result. As a result of the findings in the 1995 PIAA Breast Cancer Study risk management recommendations have been proposed (Table 1).

The Physician Insurers Association of America is an association of 50 medical malpractice insurance companies that are owned or controlled by physicians (44 domestic, 3 international companies) or dentists (3 companies) and 4 reinsurance companies. The member companies collectively insure approximately 225,000 physicians and dentists - more than 60% of all physicians/surgeons and dentists in private practice in the United States. A primary goal of the PIAA is loss prevention and risk management - helping physicians and dentists practice high quality medicine. The PIAA's Data Sharing Project is a key component of that effort.

About the Author: Andrew K. Bennett, JD, has been General Counsel and Vice President-Claims for Intermed Insurance Co., since July 1994. Prior to that time he maintained a private practice of law, primarily handling defense of medical malpractice cases.

Anyone interested in receiving a complimentary copy of the 1995 Breast Cancer Study is invited to send a request to Mr. Bennett, c/o Intermed Insurance Co., 1903 E. Battlefield, Springfield, MO 65804.

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The New Social Engineers of the 90s: Federal Trade Commission (FTC) and the Department of Justice Anti-Trust Division (DOJ)

By Arthur Gale, MD

The term "social engineering" is used by the American public generally in a pejorative sense to describe a failed government program. The most notable recent example of social engineering gone awry is Lyndon Johnson's "Great Society." Most political observers across a broad spectrum - whether conservative or liberal, whether Republican or Democrat - view much of this government experiment as flawed.

There is another equally dangerous government experiment in social engineering going on right now by the FTC and the DOJ. Most physicians and Americans are not even aware of this experiment. It is wrapped in conservative rather than the liberal rhetoric of the Great Society. Its goal is to bring down medical costs.

The originators of this program remain largely anonymous. But, it is clear that the main impetus for cost containment comes from business and insurance interests and public policy experts both in and out of government. The model for lowering medical costs is "free market" economics. The rules governing this model are developed by the FTC-DOJ. (It is simply a historical accident that two, rather than one, government agency handles antitrust matters.) These unelected officials have virtually dictatorial power in writing, interpreting, and implementing antitrust regulations. Like the Federal Reserve, they are not accountable to the legislative or executive branch of government.

During 1994, the DOJ and FTC promulgated their "Statements of Enforcement Policy and Analytical Principles Relating to Health Care and Anti-Trust" (the "Guidelines"). The Guidelines have a high sounding title, as if they are based on immutable scientific principles. In fact, they are arbitrary and place physicians at great disadvantage in the development of health care delivery networks and plans in comparison to insurers and hospitals.

The American Medical Association has expended enormous efforts in trying to obtain antitrust relief at the federal level - all to no avail. The Sherman Anti-Trust Act of 1890 prohibits competitors, i.e., physicians, from collaborating and fixing prices. The FTC and DOJ have interpreted this law as preventing physicians from forming their own networks unless they share risk.

The major restrictions on the formation of networks by physicians are as follows:

- It is illegal for physicians to form Preferred Provider Organizations (PPOs). As the AMA points out, the operation of PPOs is big business. Over 50 million Americans are members of PPOs - more than are enrolled in HMOs. PPOs are acceptable to most physicians because they do not contain withholds, i.e., economic incentives to under-serve patients. They are discounted fee-for-service plans which are engaged in strong utilization and case management in order to keep down costs. Presently insurers and entrepreneurs own 93% of all PPOs. Under the "Guidelines," physicians must be merged in order to form a PPO.

The AMA has maintained that the prohibition on forming physician-directed PPOs makes no economic sense. It requires a third party, such as an insurance company, which must recover its costs and generate profits. These third party insurance companies' middlemen can consume up to 30% of the health care dollar in administrative costs.

■ Another instance of social engineering by the FTC/DOJ in the "Guidelines" is the messenger model, which prohibits doctors from sharing directly information with payors. The messenger model also precludes independent physicians from forming unions and collectively bargaining with third party payors.

In the messenger model, the network hires a "messenger," an individual who discusses fees with a third party which is usually an insurance company. The messenger must then report back to each doctor *individually* on the fee to be paid. The physicians must not discuss the fees between themselves on penalty of criminal prosecution. According to the AMA, the messenger model is expensive and cumbersome to operate. It prevents doctors from being able to negotiate quickly and responsively, and thus does not facilitate lower fees which would result in lowering total medical costs.

Meanwhile, the insurance companies through mergers and acquisitions form oligopolies and are able to carve up markets. Although they are not supposed to actively engage in collusion, they can easily obtain information on the insurance rates of their two or three competitors in a particular metropolitan area, and they also can easily obtain information on how much capitation and withhold they pay physicians. Historically, oligopolies initially fix prices so low that they drive the competition out of the market. Once that occurs, they then raise prices, stifle innovation and lower quality. The end result is insurance company price fixing. At the present time, this scenario is of little concern to the FTC/DOJ.

■ The definition of "substantial financial risk" in the "Guidelines" severely limits physician-sponsored networks and plans.

According to the FTC/DOJ when doctors enter the marketplace, simply making a financial investment like in any other business start-up does not constitute sufficient risk. Guidelines issued last Fall indicate that risk means capitation and withhold.

First, let us examine capitation. All health care systems have some form of capitation. For example, in the Canadian single payor system, each province has a fixed amount of money to spend on health care. Physicians negotiate fees directly with the government. When the province of Ontario ran out of money recently, it simply closed hospitals for a few weeks except for emergency care.

In Germany, the sickness funds use capitation. Sickness funds are under government sponsorship or supervision. They negotiate with physicians the amount of money necessary to deliver health care to a given population. The physicians then police themselves and prevent over-utilization of resources by their colleagues so that the funds can be spent wisely.

Only in America where health care is linked to employment do physicians accept capitation from insurance companies. These insurance companies have high administrative costs, must earn shareholder dividends, and often pay exorbitant salaries to administrators. For example, the CEO of U.S. Healthcare earned $10 million in one year. He has a financial stake worth over $700 million in this corporation.

If medical care is to be capitated, in my opinion, it would best serve the public interest if negotiations took place directly between doctors and payors (i.e., business or the government) directly rather than through the high-priced middleman insurance industry. Insurance companies are actually frightened that this scenario could easily come about in the future.

■ The final FTC/DOJ rule requiring a withhold for physicians to compete in the marketplace is the most egregiously wrong-headed example of all of their social engineering. The withhold is a percentage - usually 20% of the monthly capitated fee per patient which is paid to physicians. This capitated fee is usually between $7-10 per month. The withhold is part of the trendy, new, but unproven, economic theory wherein the provider (physician) is paid for not ordering a test, not ordering a procedure, and not referring a patient to a specialist. The withhold is based on an economic theory which holds that all human behavior can be explained in economic terms.

The withhold is based on the fact that about 70% of the cost of medicine is attributed to physicians' ordering tests, procedures, referrals, and medicines. The concept of the withhold does not take into account that most physicians do not financially profit when they refer patients to specialists, order prescriptions, or order most of the big ticket items such as MRIs, CT scans and GI series, etc. Yet, managed care includes part of the cost of these items in physicians' withhold. According to

Continued on page 630

Continued from page 629

managed care, the withhold concept in essence blames the physician for the patient's illness and makes the physician financially responsible for paying for that illness.

The withhold also does not take into consideration the case mix or severity of illness of the patient. It does not take into consideration that when a sick patient walks into the office with congestive heart failure, diabetes, cancer, even AIDS, that the doctor is going to try to do everything possible to help that patient. If the physician is going to treat seriously ill patients while thinking about his or her withhold, he or she is going to under-serve those patients by withholding needed treatment.

The withhold theory is basically flawed. It does not take into consideration that doctors act for professional reasons. Withholds turn medical care into a commodity. (From a practical standpoint, physicians usually never receive most of their withhold, no matter how they practice. The insurance companies simply retain this money for "administrative costs" and shareholder profits.)

Financial withholds are inconsistent with AMA policy. The Council for Medical Services Report 1 (A-95, page 11), states that the AMA "opposes economic incentives which can result in under-serving patients' medical needs." Similarly, official Medicare policy opposes economic incentives which can result in under-serving patients' medical needs. The state of Maryland has recently passed a law which makes withholds illegal. Only the private sector insurance companies and corporations lack the ethical standards to acknowledge that withholds can harm patients.

But to my surprise, as the story unfolds, it is neither the for-profit HMOs nor the large corporations who are fundamentally responsible for promoting physician capitation and the concept of withhold. The major credit, or rather blame, for the imposition of withholds and a whole new economic system on the medical profession and the American public goes to the U.S. Government.

This fact was brought home to me in an astonishing commentary which appeared in the "Letters to the Editor" section of the *Journal of the American Medical Association* (*JAMA*, August 23-31, 1995;274(8). The *JAMA* commentary was written by representatives of the Council of Ethical and Judicial Affairs (CEJA) - the AMA council which concerns itself with ethical issues.

The spokespersons for CEJA said that when CEJA tried to address the problem of financial withholds, the FTC issued an order "which precluded CEJA from issuing restrictive guidelines in this area." In other words, although the AMA policy opposes withholds, if CEJA issues guidelines to the 300,000 AMA physician-members advising them that it would be unethical to enter into financial arrangements with insurance plans which employ withholds, then the AMA itself would be in criminal violation of Federal antitrust law.

After pausing and thinking about this incredible piece of information, I contacted an AMA attorney who specializes in antitrust issues.

"How," I asked him, "can the FTC limit the freedom of speech of an AMA council which concerns itself only with ethical issues? Is this not a violation of First Amendment freedom of speech rights?" His reply was that the FTC can limit any statement that contains guidelines which would inhibit freedom of competition.

"Well," I went on half-facetiously, "what if CEJA issued a statement supporting the Ten Commandments and the FTC interpreted one of these commandments as inhibiting freedom of competition?" His response implied that hypothetically the FTC could suppress any CEJA statement.

I was beginning to get the message. It seems that the FTC bureaucracy considers its policy on inhibition of free competition more important than ethical precepts developed slowly and often painfully over the past 5,000 years.

"But," I persisted, "what about the quality of care? What if withhold harms patients by imposing economic penalties on doctors if they order necessary tests or procedures, or if they refer patients to specialists?" The answer was that only a public outcry about the quality of care will compel the FTC to change it position. The attorney added that is why the AMA is collecting data from physicians from all across the nation on quality of care issues in managed care.

Thus, elitists bureaucrats at the FTC and, to a lesser degree, the DOJ, have wrapped the unethical practice of withholds (a practice officially opposed by the 300,000 members of the AMA and probably tens of millions of Americans if they understood what withholds were all about) in a mantle of government-sanctioned respectability and essentially made them the law of the land.

If you would ask our elected representatives in Congress what a withhold was, I would guess that over 95% would not have the vaguest idea of what you were taking about. (And to think, since my junior high school social science classes, I have suffered from the delusion that it was our elected representatives and senators who made the laws.)

It is ironic that the FTC is in the hands of social engineers whose direct actions are resulting in the creation of huge oligopolies. The FTC was created by President Woodrow Wilson, Justice Louis Brandeis, and others early in this century whose goal it was to break up the trusts. They also created the Clayton Anti-Trust Act at the same time. From the time of Wilson and Brandeis down through the Franklin D. Roosevelt administration to the present day when the government broke up AT&T, government trust busters have had the same goal - to break up, not to create oligopolies, and to limit, not to enhance, concentrations of power. When it comes to health system reform, the FTC/DOJ have turned upside down the original intent of the framers of antitrust regulations in our nation.

Because the AMA has been so frustrated at the national level, its new strategy is to make an end run around the FTC/DOJ and seek relief at the state level. A legal doctrine known as "state action immunity" permits states to pass legislation that will provide immunity from federal antitrust laws. About 17 states have passed laws which will provide immunity for physician-sponsored networks. On a national level, the AMA is trying to form physician-sponsored coordinated care organizations (PCCOs) that will escape antitrust scrutiny. You will hear more about these new AMA approaches to antitrust reform in the near future.

It took almost three decades to appreciate the failures of the Great Society and to try and correct its problems. Let us hope we can learn a lesson from this experience. Government policies, even if they have large public support initially like the Great Society did, are not always correct. Current government antitrust policy is flawed, unfair, and has the potential to harm patients. Let us not take three decades to realize this. It may be too late. Medicine as an independent profession may have been destroyed by then. MoMed

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☐ Monitored nearly 1,300 bills submitted during the 1995 General Assembly of the Missouri Legislature;

☐ Authored the **Patient Fairness Act**, which when enacted, will restore and preserve clinical autonomy by requiring due process and other important legal rights for physicians in managed care organizations;

☐ Helped to defeat scores of detrimental legislative proposals including bills that would have legalized lay midwifery, created socialized medicine in Missouri, and much, much more;

☐ Provided counsel to the State's 34 Senators and 163 Representatives on medical issues as they met to consider health care legislation;

☐ Maintained the highly effective "Key Contact" network that keeps physicians across the state in close contact with their lawmakers;

☐ Authored a health care reform package for consideration by the Missouri General Assembly;

☐ Maintained contact with Missouri's Congressional Delegation in Washington D.C. as they considered health care reform, tort reform, and countless other federal rules and regulations;

☐ Maintained a special liaison committee to improve communications between the medical community and the State Board of Healing Arts;

☐ Offered the *Physician's Guide to Law and Medicine* to assist members in understanding the laws that affect the practice of medicine;

☐ Participated in the fifth annual Medical-Legal Symposium to familiarize members with important medical-legal issues;

☐ Successfully challenged several rules published in the *Missouri Register* which would have had a detrimental impact on your patients or your practice;

☐ Represented your interests at numerous public hearings on a variety of medical issues;

☐ Offered the MSMA's Model Medical Staff Bylaws which have received widespread recognition and acceptance by medical staff members working in hospitals throughout the United States;

☐ Represented your interests at meetings of the Missouri PRO Board of Directors;

☐ Assisted over 65 impaired physicians through the Missouri Physicians' Health Program;

☐ Sponsored Missouri State Medical Services, Inc. to offer physicians practice management consultative services;

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☐ Monitored and approved CME accreditation for institutions in the state of Missouri;

☐ Provided CME coursework for 25 specialties during the MSMA's 1995 Annual Meeting in St. Louis;

☐ Sponsored practice management workshops for physicians and office staff at locations around the state;

☐ Managed the self-sustaining 501(c)(3) Missouri State Medical Foundation which provided over $250,000 in loans this year to more than 60 Missouri medical students;

☐ Published monthly issues of *Missouri Medicine*, the Journal of the Missouri State Medical Association;

☐ Published *Progress Notes*, a monthly newsletter designated to keep you and your colleagues abreast of current events that effect your profession and practice;

☐ Responded to numerous requests for information from journalists;

☐ Mailed to each member the highly-acclaimed *Legislative Report* every week during the legislative session;

☐ Supported the MSMA Physician Placement Service which matches interested physicians with communities seeking qualified applicants;

☐ Sponsored the MSMA-Health Education Foundation to improve health care information and patient care by providing workshops for media training, public information research and opinion surveys, television production, and pubic health education exhibits and projects;

☐ Prepared to establish an electronic information network to communicate a variety of topics including Legislative Updates and Federation information to MSMA members more efficiently through a bulletin board and e-mail system;

☐ Developed an MSMA videotape program for television broadcast that features Missouri physicians discussing medical matters on television stations across the state;

☐ Funded the Medical Practice Research Center to study patient outcomes and practice variations on several procedures to provide physicians with valuable data regarding usage rates and practice guidelines;

☐ Worked extensively on the implementation of the CLIA regulations to make them as flexible as possible;

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Membership Notes

Gary A. Dyer, MD

TC Kiekhaefer M.D

Ted Kiekhaeffer, MD

J. Regan Thomas, MD

Gary A. Dyer, MD, St. Joseph dermatologist, has been honored by election to membership in the American Dermatological Society (ADA). Membership is limited to 200 chosen on the basis of service and leadership in dermatology, the medical profession in general, and their communities. Dr. Dyer has been in private practice in St. Joseph more than 20 years. He is past president of Buchanan County Medical Society, Missouri State Medical Association, Kansas City Dermatological Society, Missouri Dermatological Society, and the University of Missouri School of Medicine Foundation. He is currently a trustee of Boone County Medical Society.

The first annual **Ted Kiekhaefer, MD,** Memorial Healthy Choice American Heart Walk will be held Oct. 22 in St. Joseph. A portion of the funds raised at this event go to the Ted Kiekhaefer, MD, Memorial Fund to assist students pursuing a healthcare profession with tuition. Additional funds will benefit the American Heart Association for its research and education. Dr. Kiekhaeffer received a heart transplant nine and half years ago. His new heart gave him time to open three diverse medical practices, introduce community wellness programs and earn a master's degree in Public Health. He also inspired others to pursue healthcare professions, shared comfort and courage with new heart transplant recipients and their families, and had quality time with his own family.

J. Regan Thomas, MD, has been named chair of the department of otolaryngology, head & neck surgery at St. Louis University School of Medicine. Dr. Thomas serves as president of the American Board of Facial Plastic and Reconstructive Surgery. He has also served as president of the American Academy of Facial Plastic and Reconstructive Surgery and president of the Missouri Society of Otolaryngology - Head and Neck Surgery. Dr. Thomas is the editor of *Missouri Medicine* serves on the editorial boards of six medical journals. He is also the host of regular medical stories produced by the MSMA and televised by local news programs.

Ronald G. Evens, MD, professor and chairman of the department of radiology at Washington University has been named Vice Chair of the Board for the American College of Radiology.

Edward J. O'Brien, Jr., MD, of St. Louis, has been named as a fellow of the American College of Radiology. Dr. O'Brien practices at Deaconess Hospital and St. Louis University.

Lawrence J. Baudendistel, MD, PhD, vice chair of the department of anesthesiology at St. Louis University Health Sciences Center, has been named chair of the department. Dr. Baudendistal plans to broaden the scope of anesthesia department to encompass a major role in chronic pain management, anesthesia critical care and surgical services management.

Louis V. Avioli, MD, professor of medicine at Washington University, received an NIH grant to train individuals in the field of bone and mineral metabolism.

Jeffrey Lowell, MD, Todd Howard, MD, and **Surendra Shenoy, MD,** Washington University surgeons, performed St. Louis' first double liver transplant by dividing a single donor liver between a 47-year old woman and a 5-month-old girl. The first successful double liver transplant in the world was performed in 1988, but the procedure was abandoned because of poor results. Updated surgical techniques and a severe shortage of donor livers have renewed interest in the split liver transplants.

MSMA members' honors and achievements including election or appointments to national or state office awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 102 Jefferson City, MO 65102.*

IN MEMORIAM

Robert D. Duncan, MD, 83, Springfield, Missouri, died August 29, 1995. Dr. Duncan received his medical degree at the University of California Medical School, San Francisco, in 1937. He began practice as a general surgeon with the U.S. Public Health Service and served at Marine Hospitals in Seattle, Pittsburgh, Chicago, and under with the Navy at the Marine Hospital in Baltimore. While there he taught anatomy at the University of Maryland. Dr. Duncan trained at the Mayo Clinic. He was assigned to the U.S. Medical Center in Springfield to establish and head a surgical service. In 1946, he joined Dr. Thomas Enoch Ferrell in private practice in Springfield. Together they founded the Ferrell-Duncan Clinic, now the largest physician-owned clinic in the state of Missouri with 58 doctors practicing. He was also on the staffs at St. John's Regional Health Center and Cox Medical Centers. Dr. Duncan was a past president of the Greene County Medical Society, a Fellow of the American College of Surgeons, a Diplomat of the American Board of Surgery, Southwestern Surgical Congress, Missouri State Surgical Society, and member of the American College of Chest Physicians.

Frank H. Hodgson, MD, 83, Overland Park, Kansas, died August 25, 1995. Dr. Hodgson received his medical degree at St. Louis University in 1939. He was an abdominal surgeon affiliated with St. Luke's Hospital. Dr. Hodgson was a member of the Metropolitan Medical Society of Greater Kansas City, the Missouri State and American Medical Associations, the American College of Surgeons, and the Southwestern Surgical Congress.

R. Emmet Kelly, MD, 85, Defiance, Missouri, died August 23, 1995. Dr. Kelly received his medical degree at St. Louis University in 1932. He was a specialist in occupational health and medical director for the Monsanto Company for 28 years. Dr. Kelly served in the Army Medical Corps during World War II. Following the war he returned to Monsanto's medical department and became medical director in 1946. After he retired in 1974, he was medical director of Consolidated Aluminum Company for ten years. Dr. Kelly was an assistant clinical professor of internal medicine at St. Louis University medical school. He was a member of the American College of Physicians, The American Occupational Medical Association, the American Society of Clinical Pharnacology & Therapeutics, and the American Academy of Occupational Medicine.

Ellen Shattuck Loeffel, MD, 89, St. Louis, Missouri, died August 15, 1995. Dr. Loeffel attended medical school at Columbia University, New York, and did cancer research for two years at Rockefeller Institute. She received her medical degree at Washington University in 1935. Dr. Loeffel was in private practice in St. Louis for 40 years. She was one of the first female obstetrician-gynecologists in the St. Louis area. Dr. Loeffel was an advocate for girls and young women and often spoke at community and civic meetings. She was on the staffs of the old Booth Memorial Hospital, Jewish Hospital and St. Luke's Hospital in St. Louis and at St. Luke's Medical Center in west St. Louis County. She retired in 1977. Dr. Loeffel was a past president of the Women's Physician Association of St. Louis. She served as an officer of the St. Louis Metropolitan Medical Society, and former chairman and board member of the YWCA. She was a former member of the St. Louis Health and Welfare Council and a volunteer with the United Fund, now the United Way of Greater St. Louis.

DeArmond Moore, MD, 82, Springfield, Missouri, died August 5, 1995. Dr. Moore received his medical degree at the Medical College of Virginia, Richmond, in 1945. He was chief surgeon and later medical director at the U.S. Medical Center in Springfield. He retired after 21 years as a captain in the U.S. Public Health Service. Dr. Moore entered private practice in 1970 at Smith-Glynn-Callaway Clinic and later opened his own practice in primary care and industrial medicine. He retired from medical practice in 1985. Dr. Moore received his 50-year service pin from the Missouri State Medical Association this year. He was a member of the American Occupational Medical Association.

Melvin Rubenstein, MD, 74, Glendale, Missouri, died August 11, 1995. Dr. Rubenstein received his medical degree at the University of Illinois, Chicago, in 1944. He had been in private practice in St. Louis since 1949. Dr. Rubenstein was an emeritus staff member of Jewish Hospital. He was a psychiatrist and consultant for 40 years for Edgewood Children's Center in Webster Groves, General Protestant Children's Home in Creve Coeur, and the Annie Malone Children's Home, now Annie Malone Children & Family Service Center. Dr. Rubenstein was a member of the American Psychiatric Association.

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MOMEDAM

A New Wave of Treatments for HIV Infection Is on the Horizon

David McKinsey, MD

"Maybe in some small way I can contribute to solving the puzzle," said Rick, an HIV-positive patient involved in a two-year-long clinical trial of U-90 (delavardine). "I may be dead before the answers are known, but I've always felt that the good works a person does will outlive them and hopefully contribute to the betterment of humankind. If in 20 years a cure is found, that will be enough."

This young man is representative of many courageous volunteers who are participating in clinical trials in Missouri to find ways to treat or prevent AIDS. No one knows whether it will be two years or 20 years until significant advances are made, but research has already improved the quality of life of HIV-positive people in this state, and all of us look optimistically to the day when HIV goes the way of the smallpox virus.

Eradicating a virus, however, is a formidable challenge. The goal of preventing HIV infection from progressing to full-blown AIDS is the impetus for extensive research in medical centers throughout the world, including several centers in Missouri.

The not-for-profit Kansas City AIDS Research Consortium (KCARC) in Kansas City has conducted original research and participated in several multi-center clinical trials. Since 1988 when the organization was founded, large numbers of volunteers have participated in study programs. More than 1,250 patients have taken part in KCARC's studies through eight sites in the Kansas City Metro area: Baptist Medical Center; K.C. Free Health Clinic; University of Kansas Medical Center; Menorah Medical Center; Research Medical Center; Plaza Internal Medicine/Infectious Disease-St. Luke's Hospital; Trinity Lutheran Hospital; and Truman Medical Center. KCARC works with HIV-infected individuals at all stages of the disease.

The benefits for patients include: (1) ongoing medical evaluation and monitoring of health status by an AIDS specialist; (2) availability of laboratory tests and physical exams at no charge; (3) the possibility of obtaining the newest and most promising drug therapies under study; and, (4) the personal satisfaction of providing a community service by contributing to the advancement of medical knowledge.

Significant Studies this Year

Currently 12 studies are underway at KCARC, including the following:

Saquinavir. The protease inhibitor saquinavir is designed to render newly produced viral particles noninfectious. This study compares the effectiveness of a variety of combinations of the drugs AZT, ddC and saquinavir.

Sulfa Desensitization Study. This study is designed to determine whether or not people who have had mild reactions while taking trimethoprim-sulfamethoxazole (TMP/SMX) can tolerate the drug after undergoing a desensitization protocol. TMP/SMX is the most effective drug for preventing Pneumocystis carinii pneumonia (PCP).

Triple Combination Study 1. Five pharmaceutical companies joined forces to evaluate the safety and efficacy of multi-drug combinations for treatment of HIV infection. This study compares the efficacy of AZT/ddC, AZT/ddC/saquinavir, and AZT/ddC/nevirapine.

Triple Combination Study 2. The goal of this study is to evaluate the tolerance as well as the immunologic and virologic effects of multidrug antiretroviral therapy. This 48-week study of four drugs (AZT, ddI, nevirapine and 3TC) will provide information on how well the assigned drug combination decreases the number of viral particles in a patient's blood and increases the number of CD4+ cells, prevents clinical or laboratory test abnormalities, and delays HIV disease progression.

Dose Finding Study of Reformulated Saquinavir Capsules. This 1 1/2-year study compares the antiviral activity and safety of hard and soft saquinavir tablets and will determine if absorption of the drug is improved from the soft tablets.

Delavirdine Study 0021. The objectives of this two-year study are to evaluate the safety, tolerance and antiviral effects of three fixed doses of delavirdine (U-90) in combination with AZT versus AZT alone.

Delavirdine Study 0017. The purpose of the this study is to evaluate the safety, tolerance and antiviral effect of delavirdine (U90) in combination with didanosine (ddI) versus ddI alone, and the efficacy of the regimen in delaying progression of disease in HIV-infected patients.

Thymopentin (TP-5) Immune Modulator Study. This two-year study assesses the efficacy of the immune modulator thymopentin in maintaining cellular immunity at a level seen in early stages of HIV infection (prior to the development of symptomatic HIV infection and CD4 lymphocytopenia) and slowing the progression of HIV infection. Drugs examined will be thymopentin (Timunox) alone or in combination with either AZT, ddI, AZT/ddC versus placebo alone or in combination with either AZT, ddI, AZT/ddC, AZT/D4T or D4T.

Mycobacterium Avium-Intracellular Complex (MAC) Treatment Study. Determining the safety and efficacy of azithromycin plus ethambutol compared to clarithromycin plus ethambutol is the purpose of this 24-week study. The protocol will include only those patients who have had documented MAC bacteremia within the previous two months.

Nevirapine Study. This protocol's objectives are to evaluate the safety, tolerance and antiviral effect of nevirapine in combination with AZT versus AZT alone. Effects of treatment on CD4 cell counts and viral burden are assessed after three and six months of treatment.

KCARC will soon initiate clinical trials on nutrition and treatment of wasting syndrome.

Histoplasmosis

KCARC has had a major interest in histoplasmosis, which is a particularly common opportunistic infection among HIV-infected persons in Missouri. KCARC established a database of 305 patients to assess risk factors for histoplasmosis, and demonstrated that the most significant is a CD4 cell count below 150/μL. This information was used to establish an ongoing multi-center trial to assess whether itraconazole prophylaxis can prevent histoplasmosis and other fungal infections.

The Changing Climate

Public interest in the HIV/AIDS epidemic has waned to some extent in the past few years. HIV has proven to be an exceptionally formidable foe, developing resistance to anti-viral drugs at a rapid pace. The media has turned its attention elsewhere as HIV/AIDS has become a more "routine" and less newsworthy issue. Government funding for research has been cut.

The need to focus attention on this disease, however, has not abated. Community-based research organizations play an important role in the national research efforts against AIDS by participating in multicenter studies and conducting original research into issues of local importance. Moreover, KCARC provides a public service by enabling patients to receive experimental therapies locally.

Only through the selfless commitment of Rick and many other volunteers has it been possible to undertake important clinical research studies in Kansas City and elsewhere. KCARC looks forward to its continued collaboration with the HIV-infected community as we strive to bring the devastating HIV epidemic to a close. **MoMed**

The Author

David McKinsey, MD, is president of the board of directors of Kansas City AIDS Research Consortium.

Outcome Variations for BPH-TURP Patients

David Hardy, MD, Susan Elder, MA, Janice Pirner, LPN,
Brad Hegemann, MA, and Gary Fortune, DO, MPH

An estimated one in every four men in the United States will be treated for the relief of symptomatic benign prostatic hyperplasia (BPH) by age 80. While both open prostatectomy and transurethral incision of the prostate (TUIP) are alternative surgical procedures, transurethral resection of the prostate (TURP) is by far the most popular surgical therapy among the more than 300,000 surgical procedures for BPH performed annually in the United States.[1] TURP is currently the predominant therapy for BPH among Missouri physicians, as well.

Within the Medicare population, TURP is second only to cataract surgery in the ranking of most frequently performed procedures. Given its high profile, both in terms of utilization and concomitant public dollars expended, TURP is one of several clinical topics that have recently undergone preliminary study by Missouri Patient Care Review Foundation (MPCRF), in conjunction with the implementation of Medicare's Health Care Quality Improvement Program (HCQIP).

The goal of HCQIP is to improve the mainstream of medical care to Medicare beneficiaries through analysis of patterns of care and provider education. Specifically, with respect to TURP, the MPCRF clinical and analytic staff examined several outcome measures for the procedure, including length of stay (LOS), mortality, morbidity and 30-day readmissions with procedure-related complication. The study results indicate that outcomes for the TURP procedure performed on Missouri Medicare patients closely approximate the national parameters on these same measures.

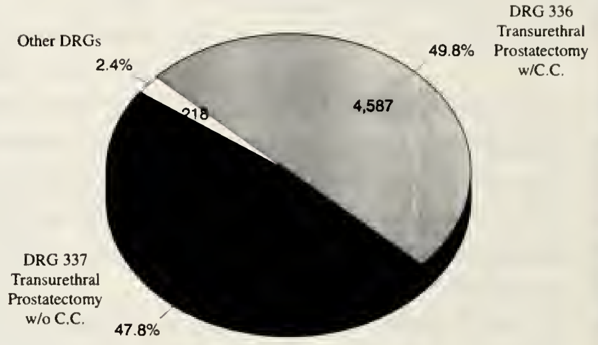
Discussion of Study Results

Using the Medicare claims data, MPCRF examined all admissions to inpatient facilities in Missouri during the period 1991-93, where the patient was diagnosed with BPH (ICD-9-CM principal diagnosis code 600) and where a TURP was performed (ICD-9-CM procedure code 60.2). Excluded from the analysis were cases where prostate cancer was listed as any one of the diagnoses on the claim. Figure 1, which provides a breakdown of the defined admissions by Diagnosis Related Group (DRG), illustrates that approximately half of the BPH/TURP patients were coded as DRG 336, while slightly less than half were coded as DRG 337. The distinction between these two DRGs involves the presence or absence of coded complications and/or comorbidities which can influence the utilization of resources, and thereby affect the DRG assignment for reimbursement.

FIGURE 1

Diagnosis Related Groups

Males with BPH Admitted for TURP



MPCRF, CYs '91-'93 Missouri Medicare Data
Information Systems

Analysis of the LOS for the two DRG groups involving BPH/TURP patients revealed that Missouri facilities in aggregate have a slightly higher mean LOS for discharges coded *with* complications and/or comorbidities when compared to the national mean LOS statistics for DRG 336. However for BPH/TURP discharges with *no* coded complications and/or comorbidities, the statewide mean LOS matches the national statistic for DRG 337. (Fig 2)

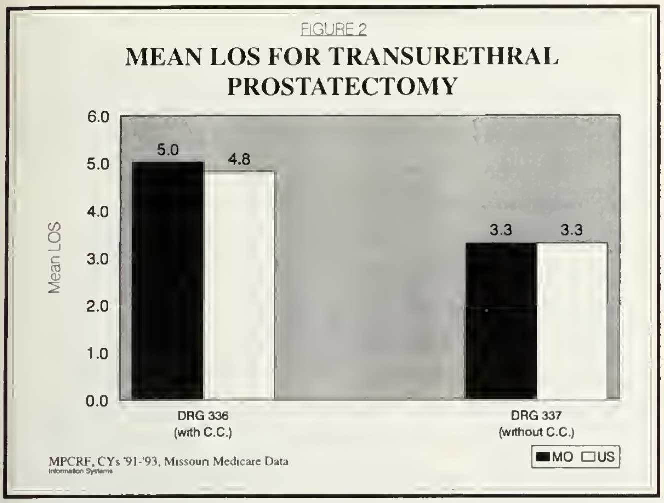


FIGURE 2
MEAN LOS FOR TRANSURETHRAL PROSTATECTOMY

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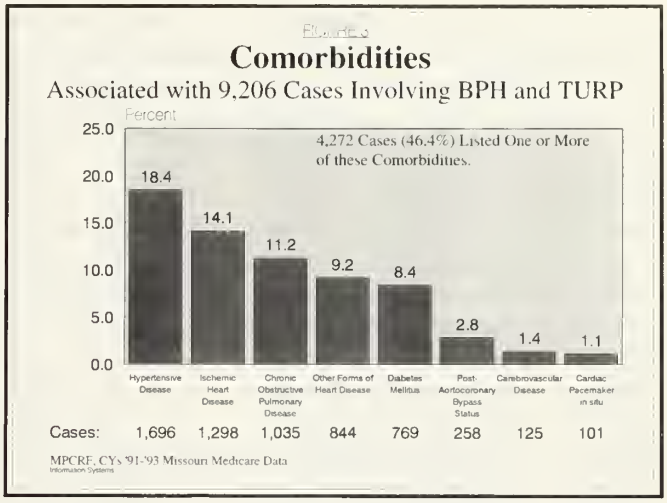

FIGURE 3
Comorbidities
Associated with 9,206 Cases Involving BPH and TURP

MPCRF, CYs '91-'93 Missouri Medicare Data
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Comorbidities of the BPH/TURP Patient

Because of the potentially confounding effects of comorbidities on outcomes for cases involving BPH and TURP, it was important to examine the categories and distribution of the various comorbid conditions. The analysis revealed that almost one-fifth of the cases involved a separate diagnosis of hypertensive disease. A significant number of cases also presented with other categories of cardiovascular disease. (Fig 3)

Joint Effects of Age and Comorbidities on Outcome

The analysis also took into account the relationship of patient age to comorbidities, and thus the joint effects of both variables on the outcome measures. Based on the distribution results of the secondary diagnoses, discussed above, and a medical assessment of the potential for complications given those co-existing diagnoses, the cases were grouped *with* and *without* comorbidities. As displayed in Figure 4, the results of this refined analysis confirms that the presence of comorbidities among BPH/TURP patients increases for each age category.

With respect to LOS, the analysis revealed an interactive effect of patient age and the presence of comorbid conditions. Overall, cases with comorbid conditions yielded higher mean scores for LOS. However, for the older age groups (75 and older) the difference in LOS between those with and without comorbid conditions was approximately twice that found within the younger age groups. Thus comorbidity appears to be more of a factor in determining LOS for the more elderly BPH/TURP patients.

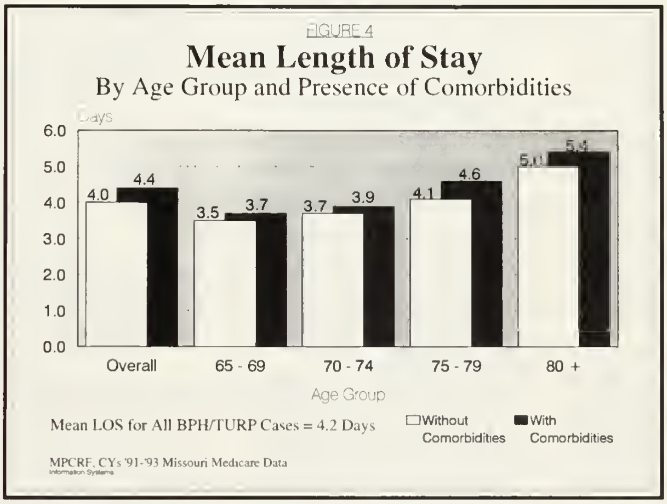

FIGURE 4
Mean Length of Stay
By Age Group and Presence of Comorbidities

Mean LOS for All BPH/TURP Cases = 4.2 Days

MPCRF, CYs '91-'93 Missouri Medicare Data
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The joint effect of age and presence of comorbidities on 30-day mortality is less clear, due to the small numbers which resulted from the analysis. As one intuitively would expect, the data indicate that the risk of mortality increases with age, and within each age group, patients with comorbid conditions face higher risk of death than those absent such conditions.

The results for the last outcome measure, 30-day readmission with procedure-related complication, is perhaps the most interesting but the most difficult to explain. Of the 9,206 cases involving a diagnosis of BPH and TURP procedure, 6.1% (or 564 cases) resulted in a readmission within 30 days of discharge. Analysis of the readmissions revealed that somewhat less than one-third of the cases (n=170) involved complications stemming from the original TURP procedure. The latter was based on examination of the principal diagnoses on

Continued on page 642

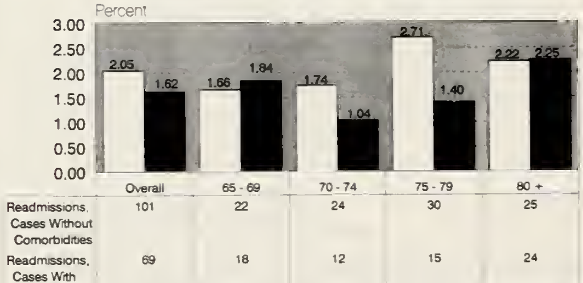
TABLE 1
Principal Diagnoses for 30-Day Readmissions Involving TURP Procedure-Related Complications
(Ranked from Highest to Lowest Frequency of Occurrence)
N=170 Cases

ICD-9-CM	Description
998.1	Hemorrhage or hematoma complicating a procedure
599.0	Urinary tract infection, site not specified
997.5	Urinary complications
599.7	Hematuria
998.5	Postoperative infection
788.2	Retention of urine
997.2	Peripheral vascular complications
038.42	Escherichia coli
038.1	Staphylococcal septicemia
590.10	Acute pyelonephritis without lesion
599.84	Other specified disorders of urethra
998.8	Other specified complications of procedure, NEC
038.9	Unspecified septicemia
038.8	Other specified septicemia
596.7	Hemorrhage into bladder wall
997.4	Gastrointestinal complications
607.84	Impotence of organic origin
997.3	Respiratory complications
996.76	Complication due to genitourinary device, graft
604.90	Orchitis and epididymitis, unspecified
601.0	Acute prostatitis
996.64	Reaction due to indwelling urinary catheter
604.99	Orchitis/epididymitis, NEC
306.53	Psychogenic dysuria
596.54	Neurogenic bladder, unspecified
599.6	Urinary obstruction, unspecified
285.1	Acute posthemorrhagic anemia
608.4	Other inflammatory disorders of male genital organs

FIGURE 5

30 Day Readmission with Procedure-Related Complication*

By Age Group and Presence of Comorbidities



*Represents 1.8% of All BPH/TURP Cases.

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Continued from page 641

the readmission claims. Table 1 provides a listing of the principal diagnoses for the 170 readmission cases that appeared to involve a TURP procedure complication.

As seen in Figure 5, for all cases *without* comorbidities present, the readmission rate with procedure-related complication was **higher** than for those *with* comorbidities present at time of initial admission for the TURP procedure. Moreover, the results differ within each age group - the 75-79 age group showing the most dramatic difference in readmission rates. One explanation may be that the longer LOS for patients with comorbidities may in fact lessen the risk of readmission for procedure-related complication; i.e., any procedure-related complication may have manifested itself and been treated prior to discharge for these patients. Even so, the subcategory numbers remain small, as was the case with the mortality findings, so one must be cautious of spurious conclusions. Future analysis on this topic should attempt to expand the database to avoid problems with small numbers.

Consideration of Alternative Therapies for BPH

Although the focus of the preliminary study was on outcomes for the TURP procedure, it may be useful to offer some discussion of alternative therapies. In February 1994, the Agency for Health Care Policy and Research (AHCPR) released *Clinical Guideline Number 8 - Benign Prostatic Hyperplasia: Diagnosis and Treatment.* Physicians, and urologists in particular, have been encouraged to review this document for its application to their treatment of the BPH patient.

While *The Guideline,* scheduled for regular updating and revision, can be applied to the majority (2/3) of BPH patients over 50, it is not intended to cover those BPH patients with otherwise significant pathology and confounding comorbidities (e.g., diabetes, urethral stricture, neurogenic bladder or hematuria). Given this caveat, *The Guideline* details the recommended patient workup and comments upon tests and procedures that may be optional or not recommended.

As part of the discussion of acceptable therapies for BPH, *The Guideline* recommends that **symptom assessment** be conducted, based on the seven question American Urological Association Symptom Index (AUASI). The latter is emphasized because BPH is primarily **a quality of life disease - not a killer** and because symptoms of BPH bother some patients more than others. *The Guideline* encourages physicians to expand their counseling role and involve the patient in the decision making to the extent desired by the patient.

Patients with minimal symptoms (AUASI scores of 0-7) may appropriately prefer "watchful waiting." While little is known about the natural history of untreated BPH, potential complications (such as urinary retention, chronic renal failure, urinary tract infection, bladder decompensation and bladder stones) are typically rare. The mortality associated with "watchful waiting" is considered to be quite low, although patients in this treatment modality should be periodically monitored for symptom level, physical finding, routine laboratory testing and other optional diagnostic procedures.

The treatment preference of patients with moderate (8-19) and severe (20-35) symptom scores may be less clear. *The Guideline* recommends that the latter be offered the full range of alternative therapies, which include: watchful waiting, surgery (TURP, TUIP or open prostatectomy), balloon dilation, alpha blockers and finasteride.

Surgery becomes more popular as symptom severity increases. However, patients may prefer a less effective therapy if it is accompanied by lower risk. *The Guideline* finds that **surgery is most likely to relieve symptoms** but is **also likely to cause complications.**

While TURP remains the most popular surgical procedure for BPH, *The Guideline* asserts that TUIP is nearly as effective and leads to fewer complications (including sexual dysfunction and urinary incontinence) as well as lower LOS. It is currently considered an **underutilized procedure.** Open prostatectomy, which typically is used for very large prostates, offers the highest degree of symptom improvement but also poses the greatest risk of surgical complications and/or mortality.

Among the other alternative therapies, balloon dilation is described in *The Guideline* as the least effective invasive procedure and one which often offers only temporary results. Balloon dilation and watchful waiting both demonstrate high failure rates in the first year, however, failure rates tend to decrease after that period of time. Little data exist on long-term treatment failure for the nonsurgical therapies. *The Guideline* indicates that there is no evidence that either alpha blockers or finasteride reduces BPH complication rates or the need for surgery. Finally, therapies involving lasers, stents, coils, hormones and hyperthermia are categorized as new technologies for which data on efficacy and safety remain inconclusive.

A basic tenet of *The Guideline* recommendations is patient involvement in the decision-making process regarding the diagnosis and treatment of his BPH. Adopting this perspective, one may find that the patient's idea of "best treatment" may differ from that of the physician. It may be beneficial to offer a forum for discussion among physicians in Missouri about *The Guideline* and its applicability to local practices in the treatment of the BPH patient. For example, are we indeed factoring in the patients' views in the selection of treatment for BPH? The basic motto "Primum Non Nocere" ("Above all else, do no harm") would seem to be especially relevant for evaluation and treatment of a disease that is very rarely lethal and has widely varying effects on the quality of life of the men afflicted by it.

Also, it may be useful to further examine *The Guideline* statement regarding the underutilization of the TUIP procedure. What are the practice variations across the state in the employment of this procedure? Is it possible that this procedure may, in fact, be underutilized by Missouri urologists? Also, what variations exist in the use of new technologies, such as laser therapy? Beyond the more obvious sources of variation, such as urban-rural differences and/or age and training of the physician, would we find variations in use of such new technologies by type of reimbursement (i.e., fee-for-service vs. capitated care)?

An attempt to answer such questions without further study would be premature. However, it does suggest that treatment alternatives for BPH warrant further evaluation, investigation and discussion. While Missouri physicians are faring at least as well as their counterparts across the nation on selected outcomes for the predominant therapy for BPH (i.e., TURP), we should remain open to opportunities for continuous improvement in the delivery of care to our BPH patients.

Conclusions and opinions expressed and methods used are those of the authors and do not necessarily reflect HCFA policy. The authors assume all responsibility for the accuracy and completeness of the PRO data used. Work is performed under Contract Number 500-92-0612 between the Missouri Patient Care Review Foundation and the Health Care Financing Administration/Department of Health and Human Services.

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1. *Clinical Practice Guideline Number 8 - Benign Prostatic Hyperplasia: Diagnosis and Treatment,* U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research, Rockville, MD. February 1994.

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References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, year, volume number, and page numbers.

Example:
1. Galata JF, Blue JM, Gaines RW. Osteochondroma of the scapula. *Missouri Medicine* 1995;92:95-97.

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Barrett's Esophagus: A Review

Devin R. Sawyer, MD, Walter E. Longo, MD, and Keith S. Naunheim, MD

Complications of Barrett's esophagus include ulceration, stricture, hemorrhage, perforation, and the development of malignancy. Barrett's esophagus and adenocarcinoma may be diagnosed simultaneously and that gastroesophageal reflux symptoms may be absent in many cases. Although endoscopic surveillance is justified, no agreement on the frequency can be made. Survival of patients with adenocarcinoma in Barrett's esophagus depends on the stage at diagnosis.

Gastric or intestinal metaplasia of the lower esophagus was first described by Morson and Belcher[1] in 1953 when they reported its association with adenocarcinoma. Four years later Barrett[2] described in greater detail the replacement of normal squamous cell epithelium of the lower esophagus with columnar epithelium. Its occurrence became known as "Barrett's" esophagus. The condition is almost invariably associated with chronic gastroesophageal reflux disease.[3] Complications of Barrett's esophagus include ulceration, stricture, hemorrhage, perforation, and the development of malignancy.

The mean age of patients diagnosed with Barrett's esophagus is 57 years and the ratio of males to females affected is 5.5:19. Conditions that exacerbate gastroesophageal reflux such as alcohol use and cigarette smoking contribute to the development of Barrett's esophagus.

The diagnosis of Barrett's adenocarcinoma is usually made in an advanced stage. Li reports that in many patients Barrett's esophagus and adenocarcinoma are diagnosed simultaneously and that gastroesophageal reflux symptoms are absent in many cases.[4] Late diagnosis accounts for the poor prognosis and illustrates the need for early detection. Aggressive endoscopic examination can lead to early diagnosis and improved survival but may not be conclusive because Barrett's epithelium can often appear as normal mucosa. Microscopic examination of biopsy samples with cytological evaluation are helpful in identifying dysplasia.

There is convincing evidence that the histology of the involved epithelium progresses sequentially from metaplasia to low and then high grade dysplasia with ultimate development of invasive adenocarcinoma.[5] However, there is no consensus on the temporal or spatial progression of the disease or whether progression is altered by surgical or medical therapy. Lerut et al, report that columnar epithelial lined esophagus carries an increased risk of degenerating into adenocarcinoma occurring in up to 45% of cases.[6] However, Rice et al, state that early reports overestimated the risk of cancer.[7] He reports an incidence of 5-10% of Barrett's esophagus developing into adenocarcinoma. It is universally believed that patients with Barrett's esophagus are 30-40 times more likely to develop adenocarcinoma of the esophagus than the general population.[3,5-8]

Report of a Case

The patient is a 42-year-old gentleman with a long history of alcohol abuse and cigarette smoking who presented to his primary care physician complaining of severe epigastric and substernal pain, nausea, vomiting, and diarrhea. The patient also complained of a long history of gastroesophageal reflux symptoms for which he did not seek medical attention. A barium swallow was performed and was unremarkable. Endoscopy was suggestive of Barrett's esophagus revealing 15 centimeters of distal esophagus with multiple areas of ulceration. No masses were identified. Microscopic examination of biopsies taken from the area involved showed diffuse intestinal metaplasia, with multiple areas of severe dysplasia. Adenocarcinoma was not identified.

Continued on page 646

Continued from page 645

The options for treatment were discussed with the patient, namely periodic monitoring with endoscopy and biopsy after medical or surgical management of gastroesophageal reflux, versus esophagectomy. Esophagectomy was agreed upon. An Ivor Lewis approach esophagectomy was performed without complication. Thirty-five centimeters of distal esophagus were removed leaving four centimeters of thoracic esophagus for esophagastric anastomosis.

Frozen section of the proximal margin of resection showed it to be free of disease. Microscopic examination of the specimen revealed diffuse intestinal metaplasia with multiple foci of severe dysplasia and acute and chronic inflammation. There was no evidence of invasive adenocarcinoma and two of two lymph nodes were free of disease.

Hypaque esophagram five days post-operatively showed the anastomosis to be intact. The patient was discharged from the hospital nine days post-operatively tolerating a regular diet. Close follow-up examination is planned with yearly office visits and post-operative endoscopic surveillance. Treatment for alcohol dependence was recommended and he was advised to refrain from smoking.

Discussion

It is unknown why a subset of patients with gastroesophageal reflux disease go on to develop Barrett's metaplasia and still a smaller subset develop dysplasia and cancer. What is known is that Barrett's metaplasia occurs secondarily to gastric content reflux and that most, if not all, adenocarcinomas of the esophagus are associated with Barrett's mucosa.[8] DeMeester et al, showed that Barrett's esophagus is associated with high esophageal acid exposure, gastric hypersecretion, and the loss of esophageal function.[5] They also demonstrated that abnormal esophageal alkaline exposure as seen with duodenogastric reflux is associated with Barrett's esophagus.

Controversy also exists over the effectiveness of medical and surgical treatment of gastroesophageal reflux disease in preventing Barrett's metaplasia. Medical management with antacids, H2 receptor antagonists, and prokinetic agents has little influence on the extent to which Barrett's metaplasia develops.[9] Surgical correction of gastroesophageal reflux with Nissan, Hill, or Belsey fundoplication may lead to partial regression of Barrett's epithelium,[3] but Menke-Pluymers et al, reported 14 patients of 112 studied who underwent antireflux surgery that went on to develop adenocarcinoma of the esophagus.[9] This suggests antireflux treatment may not result in regression of Barrrett's esophagus and may not decrease the risk of malignant degeneration.

Most pathologists believe that high grade dysplasia represents carcinoma in situ, but the interval from development of Barrett's metaplasia to high grade dysplasia is unknown. Pera et al, reports a median interval of 29 months from the diagnosis of Barrett's esophagus to the development of high grade dysplasia.[8] They also reported that 6.3% of patients who had delayed resection had high grade dysplasia that persisted without progressing into adenocarcinoma, and that 67% of patients with biopsy proven high grade dysplasia had invasive adenocarcinoma at the time of resection. Because of the such varied progression of disease and the poor prognosis of adenocarcinoma of the esophagus they recommend esophagectomy for patients with Barrett's esophagus with high grade dysplasia who are otherwise healthy. However, this recommendation remains somewhat controversial. A management spectrum exists. Esophagectomy for high grade dysplasia has been advocated by a number of investigators[6-8] to eliminate the risk of developing or overlooking cancer, and to detect and treat neoplasm at an earlier, more treatable stage. Others argue that the risk of operating is too high and that the interval from detecting dysplasia to developing carcinoma is too variable to justify esophagectomy without the preoperative diagnosis of at least intramucosal adenocarcinoma.[5,10]

DeMeester states that waiting until biopsies show intramucosal carcinoma before proceeding with esophagectomy has not compromised their survival statistics.[5] Reid et al, recommend periodic short-interval surveillance endoscopy with biopsies in patients with high grade dysplasia, stating that esophagectomy should be reserved for those patients with documented intramucosal carcinoma.[10] However, the majority of investigators are currently recommending esophagectomy for Barrett's esophagus with high grade dysplasia.

It has become widely accepted that endoscopic surveillance of Barrett's esophagus for high grade dysplasia and carcinoma results in earlier diagnosis and treatment, and improved survival. While most patients with Barrett's associated adenocarcinoma are resectable, the long-term survival is low. Menke-Pluymers et al, reported in a retrospective study of 112 patients who underwent resection of a Barrett's esophagus with adenocarcinoma, a

5-year survival of only 24%.[9] Survival was significantly better for patients without regional lymph node metastases and when the tumor was confined to the submucosa of the esophagus.

While it is agreed that endoscopy surveillance is beneficial some variation exists as to the frequency of its use and the method of biopsy. Pera et al, prefer an annual four quadrant biopsy taken every 2 centimeters of Barrett's mucosa.[8] They believe that this method of surveillance will ultimately determine which patients are at risk for developing carcinoma in the future. Lerut et al, recommend close endoscopic examination coupled with echoendoscopy[6] although Falk et al, conclude that routine use of endosonography to determine the need for surgery in patients with high grade dysplasia is not always warranted.[11] Rice et al, state that endoscopic examination every other year appears to be justified and cost effective.[7] On the other hand, Provenzale et al, recommend that annual endoscopy is preferred if life expectancy is the only factor considered, that endoscopic surveillance every two to three years if both length and quality of life be considered, and finally endoscopy every five years if cost effectiveness is factored in.[12] It is abundantly clear that endoscopic surveillance of Barrett's esophagus prolongs life but there is no consensus as of yet as to the endoscopic surveillance.

The controversy around the issue of endoscopic surveillance technique would be moot if a means to restore normal mucosa existed. Berenson et al, have demonstrated that abolition of esophageal columnar epithelium by laser ablation results in restoration of squamous mucosa, however, subsequent reports show reconversion in some cases.[13] They concede that laser ablation may not yet be an acceptable form of therapy for Barrett's esophagus, but suggest that it may be practical for patients with early, limited disease who go on to have fundoplication for gastroesophageal reflux disease. The future for diagnosis and treatment of Barrrett's esophagus may behold a time when it will become possible, with flow cytometry and p53 oncogene isolation, to identify those patients at increased risk of developing adenocarcinoma of the esophagus, and that laser photoablation may become the treatment of choice.

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Health Status of Asian Pacific Americans in Missouri

Ik-Whan G. Kwon, PhD and Mueun Bae, PhD

The dramatic increase in Asian Pacific Americans has created a different set of social, economic and health issues for the country as well as for this state. Asian Pacific Americans are extremely heterogenous and bipolar in socioeconomic status and health issues. Asian Pacific Islander Americans come from over 43 countries and speak over 100 languages and dialects. This study reveals that in this state, 23% of Asian Pacific American households are linguistically isolated. Almost 20% of Asian Pacific American families (married couples with children under 5 years old) have an income below the poverty line. The need for severe mental health service is four times higher for southeast Asian refugees than the overall population. The death rates from communicable disease and suicide are lowest for Asian Pacific Americans, and for Asian Pacific Americans, the age-adjusted death rates are widely different. For example, people with Hawaiian background appear to have a high incidence of death from heart disease (363.3 per 100,000) whereas Chinese experienced a higher incidence of death from cancer (70.2 per 100,000). The Asian Pacific Americans have the lowest infant mortality rate. This paper suggests that providers, educators and legislators should pay more attention to Asian Pacific American communities regarding socioeconomic and health care needs to create a healthy and productive community.

Asian Pacific Americans* are one of the smallest but fastest growing minority groups in the United States and the state of Missouri. Between 1980 and 1990, this minority group increased from 3.5 million to almost 7.5 million (more than a 113% increase) whereas the total population of this country experienced a 9.5% increase during the same time period. The relative share of the Asian Pacific American to the total population of this country increased from 1.55% in 1980 to 3.0% in 1990.

In Missouri, during the same time period, Asian Pacific Americans increased from 23,096 to 40,087, a 73.6% increase. The proportion of Asian Pacific Americans increased from 0.4% in 1980 to 0.8% in 1990.

Table 1 - Population Distribution for State of Missouri, 1990 (1000)

Race	1980	1990	Change (80-90%)	Share % in 1980	Share % in 1990
White	4,311.6	4,448.5	3.2	87.7	86.9
African-American	510.9	545.5	6.8	10.4	10.7
Native American	12.3	18.9	53.2	0.3	0.4
Asian/Pacific Is.	23.1	40.1	73.6	0.4	0.8
Hispanic	51.6	61.7	19.4	1.1	1.2
Others*	7.1	2.4		0.1	0.0+
Total	4,916.7	5,117.1	4.1	100.0	100.0

* In 1990 census, more populations were classified into various ethnic groups. As a result fewer population were left in "others."
"Other Minorities" are defined here as those non-white and non-African-American ethnic groups; Native Americans, Hispanics and Asian Pacific Americans. This definition was adopted in 1993 by the Minority Health Advisory Committee, Department of Health, State of Missouri.

Sources: For total population, the 1990 Census of Population, General Population Characteristics, Missouri, Table 3, p. 13. For percentage change (1980-1990) and shares, computed from the total population.

This dramatic increase in Asian Pacific Americans is due mainly to a change in U.S. immigration policies in the mid-1960s and continuous influx of refugees from Southeast Asia since 1975. Despite the increase, Asian Pacific Americans remain one of the most poorly understood minorities and their health care needs have received relatively little attention.

Asian Pacific Americans are extremely heterogenous and bipolar in socioeconomic status and health indexes. Asian Pacific Islander Americans come from over 43 countries and speak over 100 languages and dialects. There is a serious lack of translation services for Asian Pacific Americans in the various health settings. Where such services are available, the coverage is limited across different languages and dialects.

Failure to understand the health care needs unique to their culture and custom is "not only a violation of the principle of equality for all, but also an imprudent act that increases the mortalities and morbidities and health care cost of the nation."[1] Attempts to reform the health care system in Missouri should address this important issue to make health care delivery truly equal and universal.

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*According to the Census of Population 1990, Asian Pacific Americans include: immigrants and descendants of Chinese, Filipino, Japanese, Asian Indian, Korean, Vietnamese, Cambodian, Hmong, Laotian, Thai, other Asians, Hawaiian, Samoan, tongan, other Polybesian, Guamanian and Melanesian (Social and Economic Indicators, 1992, P.1).

Table 2 - Income Characteristics

Races	Household Income	Per Capita
White	$34,425	$13,663
African-American	24,176	8,576
Native American	27,364	10,072
Asian/Pacific Is.	41,350	12,666
Hispanic	33,466	10,191
Others*	31,381	9,016

Sources: Selected 1990 Census. Social and Economic Indicators, Urban Information Center, University of Missouri, St. Louis, Missouri, rev. 1992.

Table 3 - Poverty Level
Income in 1989 below the Poverty Level: Married Couple with Children younger than 18 years

Race	Under 5 years only	15-17 years only	<5 + 5-17 years only	No children
White	7.3%	5.7%	10.6%	4.5%
African-American	11.8%	9.0%	17.6%	8.2%
Native American	16.6%	10.9%	30.8%	9.4%
Asian/Pacific Is.	19.6%	7.7%	14.4%	16.4%

Sources: Selected 1990 Census. Social and Economic Indicators, Urban Information Center, University of Missouri, St. Louis, Missouri, rev. 1992.

Table 4 - Selected Income Groups (%)

Race	< $5,000	$25,000 - $35,000	$100,000 and over
White	6.1%	16.8%	3.0%
African-American	16.2%	14.1%	0.8%
Native American	11.7%	17.7%	1.7%
Asian/Pacific Is.	15.3%	15.3%	8.2%
Others	6.6%	20.3%	1.7%

Sources: Selected 1990 Census. Social and Economic Indicators, Urban Information Center, University of Missouri, St. Louis, Missouri, rev. 1992.

This article exams the socioeconomic characteristics and health status of Asian Pacific Americans in Missouri to provide planners, legislators, educators, providers, etc., with a better understanding of their health care needs.

Socioeconomic Characteristics of Asian Pacific Americans Population

The 1990 census estimated that there were 123,082 "other minorities" residing in this state as shown in Table 1. Among the "other minorities," the Hispanic population has the largest share (61,702), which is followed by Asian Pacific Americans (40,087), and Native Americans (18,873). However, Asian Pacific Americans have the fastest growth rate among them (73.6%) between 1980 and 1990, which is followed by Native Americans (53.2%) and the Hispanic population (19.4%). Although Asian Pacific Americans grew almost 74% between 1980 and 1990, its share to the total population in Missouri is less than 1%. However, the total share that Asian Pacific Americans doubled from 0.4% in 1980 to 0.8% in 1990.

This low share (0.8%) is quite a contrast with the national trend (3%). As expected, most of Asian Pacific Americans reside on both coasts. For example, in California alone, the share of Asian Pacific Americans to its total population exceeded 10% in 1990.

Most of the Asian Pacific Americans in Missouri reside in St. Louis/St. Louis County (37.8%), followed by Kansas City/Jackson County (17.2%), Boone County (8.3%) and Green County (4.1%).

Linguistics and Communication

Almost 3,000 Asian Pacific American households of approximately 13,000 (23%) in this state were linguistically isolated.[2] The high incidence of linguistically isolated families causes numerous problems in providing adequate health care to this ethnic group. The influx of refugees from Southeast Asia in the mid-1970s created additional problems. *Healthy People 2000* describes enthnocultural barriers to access of care as "...Faced with western medicine and health care system that is unfamiliar, Americans of Asian Pacific Island heritage experience unique access barriers to primary care. In addition to linguistic and cultural differences, financial problems beset many subgroups, especially recent immigrants and refugees."[3]

Income

The average income per household for Asian Pacific Americans in 1990 was over $41,000, the highest among ethnic groups (Table 2). However, the per capita income for Asian Pacific Americans was $12,666 indicating a large extended family structure which is common in Asian families.

Poverty Level

Many Asian Pacific Americans live below the poverty line. Almost 20% of the Asian Pacific American families (married couples with children under 5 years old) have an income level below the poverty line, the highest among ethnic groups (Table 3). Almost 16% of the Asian Pacific American couples without children also live under the poverty line, also the highest among the ethnic groups. The U.S. average of people living below the poverty level in 1989 was 12.4%.

Continued on page 650

Continued from page 649

The bipolar income characteristics of Asian Pacific Americans are also visible in Table 4. Over 15% of the Asian Pacific families had an average annual household income of less than $5,000 (second highest after African-Americans of 16.2%) compared with only a 6.1% for households of White families. Nationally, the mean income for poor Asian Pacific American households falls below the respective poverty threshold more than that of any racial-ethnic group.[1] However, Asian Pacific American families also have the highest percentage of income which earned more than $100,000 annual per household. This bipolar characteristic of household income is unique only to Asian Pacific American families.

Table 5 - Resident Age-Adjusted Death Rates (per 100,000): 1988-1992 in Missouri

Race	Communicable Disease	Injury	Accidental	Cerebrovascular	Heart Disease	Homicide	Suicide	Cancer
White	10.4	53.5	34.7	26.1	153.1	4.3	13.1	133
African-American	28.7	101.6	38.4	44.7	222.6	56.2	7	196.4
Native American	6.3	43	27.6	7.7	73.5	7.7	5.9	59.8
Asian Pacific	6.2	24.8	16.1	20.9	77.4	2.6	5.7	78.2
Hispanics*	30.8	57	30.1	24.1	115.6	13.5	12.9	101.7

* Included only for 1989-1992.
Sources: Missouri Center for Health Statistics, Missouri Department of Health, 1994.

Table 6 - Resident Age-Adjusted Death Rates (per 100,000): 1988-1992 in Missouri Asian/Pacific Islanders

Race	Communicable Disease	Injury	Accidental	Cerebrovascular	Heart Disease	Homicide	Suicide	Cancer
Chinese	5.6	11.4	5.9	17.4	36.6	0.0	5.5	70.2
Filipino	3.1	10.1	10.1	15.9	75.9	0.0	0.0	47.9
Japanese	0.0	25.0	12.0	3.2	47.3	0.0	13.0	55.4
Hawaiian	30.7	0.0	0.0	110.9	363.3	0.0	0.0	110.9
All	6.2	24.8	16.1	20.9	77.4	2.6	5.7	78.2

Sources: Missouri Center for Health Statistics, Missouri Department of Health, 1994.

Health Status of Asian Pacific Americans

It has been well documented that culture and customs play a significant role in health seeking behavior. Language and communication barriers between patients and health care providers is cited as one of the biggest obstacles in assessing and providing adequate health care needs for Asian Pacific Americans.[4,5]

Absence of bilingual and bicultural services in the Asian Pacific American communities cost more than $2,200 in total inpatient services versus only $179 for communities who have such services.[6] Problems related to proper interpretation and communication are also well documented in various research publications.[5] For Asian Pacific Americans, the ability to communicate their medical history and comprehend Western medical parlance in their native language profoundly facilitates access to health care.[7] Fear of difficulties in communication, compounded by shame, guilt, anger, depression, and other affective responses to certain stigmatized illnesses like mental retardation, substance abuse and HIV infection, may deter the Asian Pacific patient from seeking care.[8] Japanese, Chinese and Korean Americans are less likely than White Americans to seek treatment for alcoholism from state or mental health facilities. One study that included Asian American students who drink alcohol found that they consumed the largest amount of alcohol per day (1.46 oz. of absolute alcohol, compared to 0.76 oz. for White drinkers; 0.86 for Hispanic drinkers; and 1.29 oz. for Native Americans).[9]

Asian Pacific Americans have a more serious cultural barrier in seeking health care due their perception of the health process. Beliefs in filial piety, respect for elders and social hierarchy, and an abiding quest for harmony with nature characterize Southeast Asian culture.[10] Patients tend to seek medical assistance only after traditional healing rites have failed.

People from Asia, and especially the Far East, are particularly reluctant to reveal and openly discuss family members who are suffering from a mental disorder or substance abuse. To them, mental illness is believed to be conceived when you have 'an evil spirit,' a by-product of imbalance between body and spirit. Open discussion of mental disorders of relatives with 'strangers' including health care providers, is considered as jeopardizing their relationship with other people and society. Fewer admissions to mental institutions by Asian Americans, accordingly, does not necessarily indicate less incidence of mental disorders. As a matter of fact, a recent California study indicates that severe mental health service needs among Southeast Asian refugees is four times higher than those of the general population.[6] Asian Pacific Americans prefer to provide their own in-home care to

Table 7 - Missouri Resident Infant Mortality by Race: 1988-1992 (Per 1,000)

Race	Births	Deaths	Rate per 1000
White	316,499	2,524	7.97%
African-American	65,338	1,173	17.95%
Native American	1,012	6	5.93%
Chinese	598	3	5.02%
Japanese	173	0	0.0+
Hawaiian	47	0	0.0+
Filipino	602	0	0.0+
Other Asian	2,571	18	7.0%
Other Nonwhite	139	1	7.19%
Unknown	485	3	6.19%
Total	387,464	3,728	9.62%

Sources: Selected 1990 Census. Social and Economic Indicators, Urban Information Center, University of Missouri, St. Louis, Missouri, rev. 1992.

relatives.

Children and second generation immigrants are at higher risk for mental health problems because of problems with relating to two cultures. Immigrant children often manifest conflict that can result in cultural disintegration or an increase rate of crime.[11] Asian cultures with hierarchical social structures revere authority figures.[12] As a result, a patient of Korean descent may not question a physician's diagnosis and treatment. He or she may indicate understanding, agreement and compliance when none are intended.

All Southeast Asians have to some degree the belief that good health is a state of harmony and balance.[12-17] Illness is attributed to deficiencies or excess of physical elements (body fluids, diet), spiritual elements (anger, desire, fear, or fright), social elements (offenses to ancestors, elders, or spirits), or natural elements (hot and cold). According to their belief, healing restores harmony and balance to the individual's internal as well as external life.

Differences in health seeking behavior for Asian Pacific Americans expectedly produced a different health status. For example, the mammography screening rates are consistently lower for Asian Pacific Americans (14% among Filipinos in Hawaii compared to 24% for Caucasian), morbidity rates of Hepatitis B for Asian Pacific Americans are 34.9 per 100,000 compared to 10.7 for Caucasians and 20.3 for African-Americans.[18] Proportional mortality due to birth defects was highest among Asians (27%), followed by Whites (25%) and Hispanics (24%).[19] A 11.8 per 1,000 cases of malaria occurred from the Asian Pacific American communities as opposed to 0.15 from White, 0.68 from African-American and 0.33 from Hispanic communities.[20] Tuberculosis is the leading cause of death in some Asian countries and is a major concern in the Asian Pacific American population. The Asian Pacific Americans have a tuberculosis incidence rate five times greater than the general population.[21]

Cases in Missouri

The health status for "other minorities" in Missouri follow closely the overall trend of this country (Table 5). The age-adjusted death rates reveal a wide variation of incidence across ethnic groups. The death rates from communicable disease and suicide are lowest for Asian Pacific and Native Americans. The disparity of death rate from heart disease between Asian Pacific and Native Americans and the rest is substantial and alarming.

Even among Asian Pacific Americans, the age-adjusted death rates are widely different (Table 6). People with Hawaiian background appear to have a high incidence of death in the areas of communicable disease, cerebrovascular, heart disease and cancer compared to other ethnic groups in the state. The Japanese have a higher incidence of death from injury and suicide than other ethnic groups, whereas the Chinese experienced a higher incidence of death from cancer. The Filipino group has a high incidence of death from heart disease.

The infant mortality rate for Asian Pacific Americans in Missouri is generally lower than the state average (Table 7). It is interesting to observe that the average infant mortality rate for Asian Pacific Americans is even lower than that for the White population (7.97%). However, it should be noted that the negligible numbers of infant mortality rate for Asian Americans may be due to the misclassification of race on death certificates. For example, a study of California data revealed that the Japanese infant mortality was 22% higher after adjustment for classification errors. The same misclassification occurred for Chinese infant mortality.[1]

Issues

In spite of the unmistakable trend that the 'other minorities' groups in general and Asian Pacific Americans in particular have unique health care requirements that have been usually ignored. For example, the current health information collection form for Asian Pacific Americans in Missouri requires separate ethnic identities only for Chinese, Japanese, Filipino and Hawaiian. The rest are

Continued on page 652

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*It is the author's understanding that the Department of Health will expand the ethnic categories from the current format to one similar to the federal government mandate which includes detailed national origins of Asian and Pacific Americans, such as Korean, Cambodians, Vietnamese, etc. rather than "the Asian and Pacific Islanders." The target date is for 1996.

Continued from page 651

grouped together into "Other Asian and Pacific Islanders."*

A case is currently pending before U.S. District Court for the Middle District of Tennessee in Nashville to hear the government's legal arguments for dismissing the *Madison-Hughes v. Shalala* law suit. The suit charges federal health officials with failing to comply with the Civil Rights Act of 1964 by not requiring health providers to collect or report race/ethnicity data which could document their compliance with anti-discrimination regulations. Civil rights and health groups including the American Public Health Association have testified that race and ethnicity information should be gathered from federally funded health care providers on the new UB-92.

Only eight of the over 600 National Health Objectives for the Year 2000 targeted Asian and Pacific American groups. *Healthy People 2000* strives to improve the health status of all Americans during the 1990s. However, it fails to articulate or establish how Asian and Pacific Americans will gain more access. *Healthy People 2000* objectives set numerical targets for "...increasing the proportion of all degrees in the health profession fields awarded to members of under-represented racial/ethnic minority groups." The targets are set for African-American and Native Americans, but not for Asian and Pacific ethnic groups.

Many Asian Pacific Americans are locked out of health insurance because they work for small businesses which rarely offer health insurance. Where health insurance is available, culturally accepted medical models such as acupuncture and herbal medicine are not usually covered services.

Conclusion

The purpose of this study is to make the health care providers, administrators, educators and legislators of Missouri aware that the group recognized as "other minorities" is growing at the fastest rate in two decades and has vastly different socioeconomic characteristics and health status. Failure to understand the unique ethnic groups of our state population would create a vacuum wherein a serious gap in health status might develop between the general population and the 'other minorities' group in general, and Asian Pacific Americans in particular.

Missouri health care providers, planners, educators and legislators should start building a health care infrastructure now to address the needs of these "other minorities groups" and to prevent further health disparities. Any delay for any reasons to act on this important issue will cause costly repair later, and social discontentment among these groups.

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1. Title of Publication: Missouri Medicine
2. Publication No.: 0355-3800
3. Date of Filing: September 8, 1995
4. Frequency of Issue: Monthly
5. No. of Issues Published Annually: 12
6. Annual Subscription Price: $60
7. Compete Mailing Address of Known Office of Publication:
   113 Madison, P.O. Box 1028
   Jefferson City, MO 65102
8. Complete mailing addresses of Publisher, Editor, and Managing Editor:
   Publisher: Mo. State Medical Assoc.
   113 Madison, P.O. Box 1028
   Jefferson City, MO 65102
   Editor: J. Regan Thomas, MD
   113 Madison, P.O. Box 1028
   Jefferson City, MO 65102
   Managing Editor: Angela Allen
   113 Madison, P.O. Box 1028
   Jefferson City, MO 65102
10. Owner: Mo. State Medical Assoc.
    113 Madison, P.O. Box 1028
    Jefferson City, MO 65102
11. Known Bondholders, Mortgages, and Other Security Holders: None
12. The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes has not changed during the preceding 12 months.
13. Publication Name: Missouri Medicine
14. Issue Date for Circulation Data Below: July 1995

15. Extent and Nature of Circulation	Average No. of Copies Each Issue during Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
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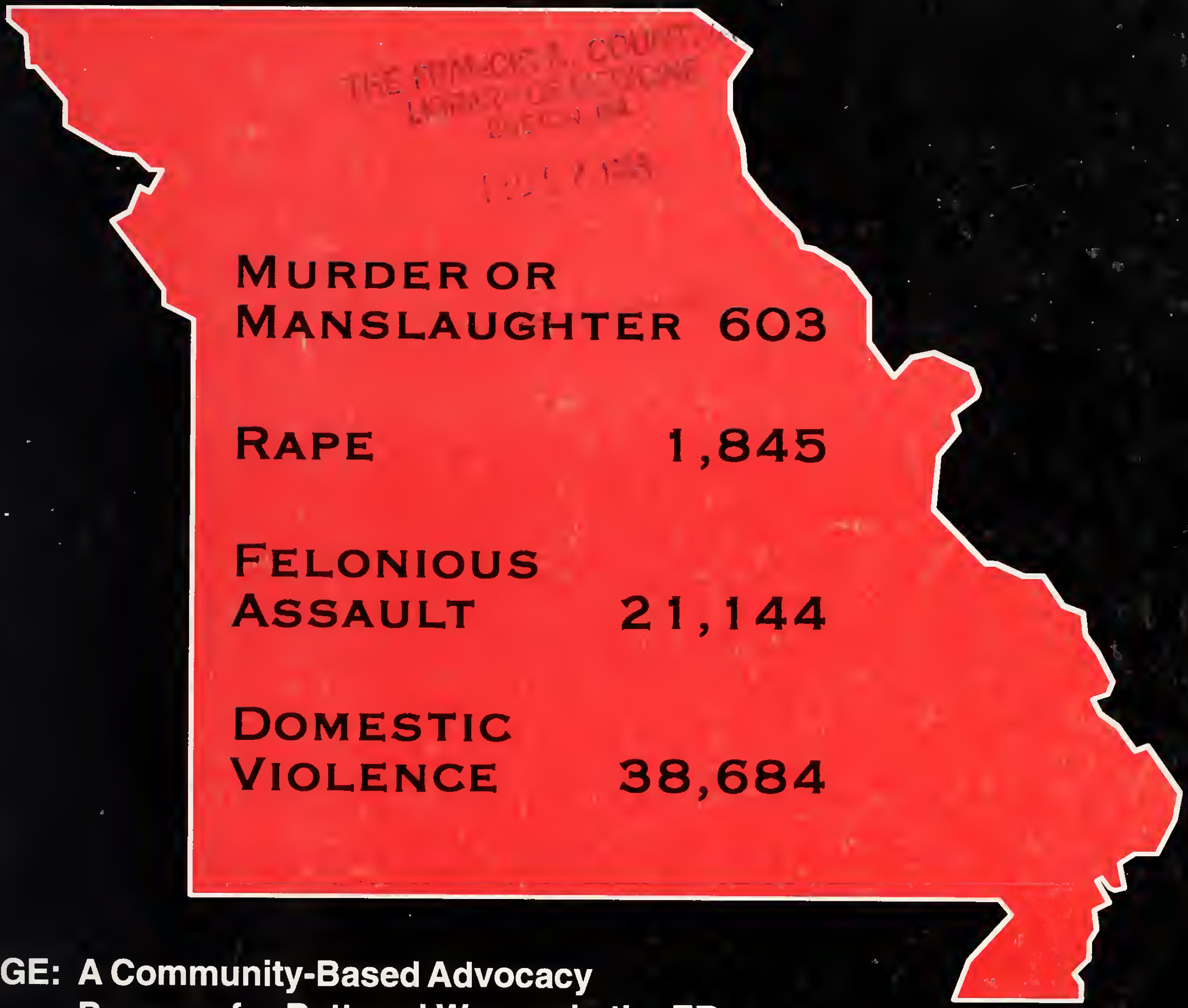

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MISSOURI MEDICINE

VOLUME 92, NUMBER 11

Cover Story

BRIDGE: A Community-Based Advocacy Program for Battered Women in the Emergency Department 685
Robert L. Muelleman, MD, FACEP, Karen M. Feighny, PhD, Colleen C. Bozard, MEd, and LeeAnn Bergin, BA

On the Cover: Statistics from the 1994 Missouri Crime Summary compiled by the Missouri State Highway Patrol. The statistics represent only incidents recorded by law enforcement. Domestic violence statistics have only been required by law to be recorded the past two years. Victims of domestic violence often do not report the abuse.

Alliance Report From AMAA Confluence I: Fight Against Alcohol and Drug Abuse - *Eileen Chalk, Tri-County Alliance President* 683
SAVE Today Program Kick-off - *Nona Chapman, MSMAA President* 684
Missouri Coalition Against Domestic Violence Information 688

Editor's Desk

Shame - *J. Regan Thomas, MD, Editor* 665

President's Page

The House of Medicine - *Frederick Hahn, MD, MSMA President* 667

Perspective

Poignant Pearls From The Past - *Wilfred E. Wooldridge, MD* 668

Medical Legal Issue of the Month

Contracting with Managed Care 671
Rick Watters, JD and Stu Vogelsmeier, MD

Otolaryngology Quiz #9 675
David Parsons, MD, Jerry Templer, MD and Barbara Wilder, RNC, PNP

138th MSMA Annual Meeting Preliminary Program Mark your Calendars and Register 680

Public Health

Prostate Cancer Incidence in Missouri: An Updated Analysis 693
Jian C. Chang, PhD, Robert A. Hagan, MS and Bernard R. Malone, MPA

Scientific Section

Radiation Therapy in the Treatment of Localized Prostate Cancer: An Alternative To An Emerging Consensus 696
Carlos A. Perez, MD, Jeff Michalski, MD and Mary Ann Lockett, MBA

Early Clinical Experience with Percutaneous Cryosurgical Ablation of the Prostate 705
Abraham S. Hawatmeh, MD, FACS, Frederick P. Walters, MD and Claire A Wooster, DSc

Membership Notes 677
Alliance Message 683
CME Calendar 711
Classified Listings 712

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $60.00. Annual subscription for members is included in the annual membership dues. Single copies are $8.00 and the per copy cost of the annual August Directory is $40.00.

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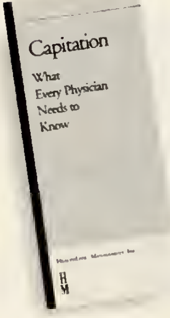

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Shame

J. Regan Thomas, MD, Editor

The *Wall Street Journal* recently broke a story based on two internal reports from a major tobacco company which indicate the chemical manipulation of tobacco to enhance nicotine delivery. The U.S. tobacco companies reportedly add ammonia-based compounds to their cigarettes according to the *Wall Street Journal* report. This mechanism allows the companies to say that they do not increase nicotine levels per se, while actually increasing the potency of the nicotine that is absorbed by the smoker.

In effect, the ammonia withdraws the nicotine from tobacco and converts it into a more pharmacologically active form. This allows the nicotine to be more readily absorbed and clinically to have a greater impact. Importantly, greater "bang for the buck" while again still allowing the company to deny adding more nicotine to the product. "Impact" by the way is a company euphemism, according the *Wall Street Journal* report, for nicotine addiction.

When it comes to teenagers, this power packed nicotine may not be the only effective inducement to begin and continue smoking. Tobacco advertising is a key component, too. Although peer pressure is often quoted as a cause, it turns out that advertising is twice as likely to send teens down that smokey path to lung disease.

A Reuters New Service report indicates studies showing that most smokers start as teenagers and amazingly, 3,000 teenagers start smoking each day. The *Journal of the National Cancer Institute* study compared the influence marketing had on teens compared to peer pressure, family pressure, and other influences. Advertising had a significant affect. It turns out that Joe Camel,™ the Marlboro Man™ and those thin Virginia Slims™ types have a big influence on kids.

Although the tobacco companies deny that they market toward kids, information continues to surface indicating otherwise. Company memos from R. J. Reynolds released by the *Washington Post* described kids as "learners" and "pre-smokers." Apparently, according to the *Washington Post*, there was even consideration of developing "youth brands" which would be attractive to kids specific taste requirements and overcome the child's initial impression of "the flavor of tobacco smoke which is initially foreign and not pleasant." They didn't overlook the "peer pressure" element either. The same memo noted that any marketing aimed at the young should focus on "...togetherness, belonging and group acceptance."

This all seems sneaky, manipulative, and unsavory as an industry. What is worse and indefensible is that they are talking about our kids. When adults make poor life style judgements it is certainly disappointing. As a society, even corporate society, there should be some greater sense of conscience and morality when dealing with children. Manipulating and misleading children and teenagers into significantly unhealthy activities is more than unscrupulous...it is unconscionable. MoMed

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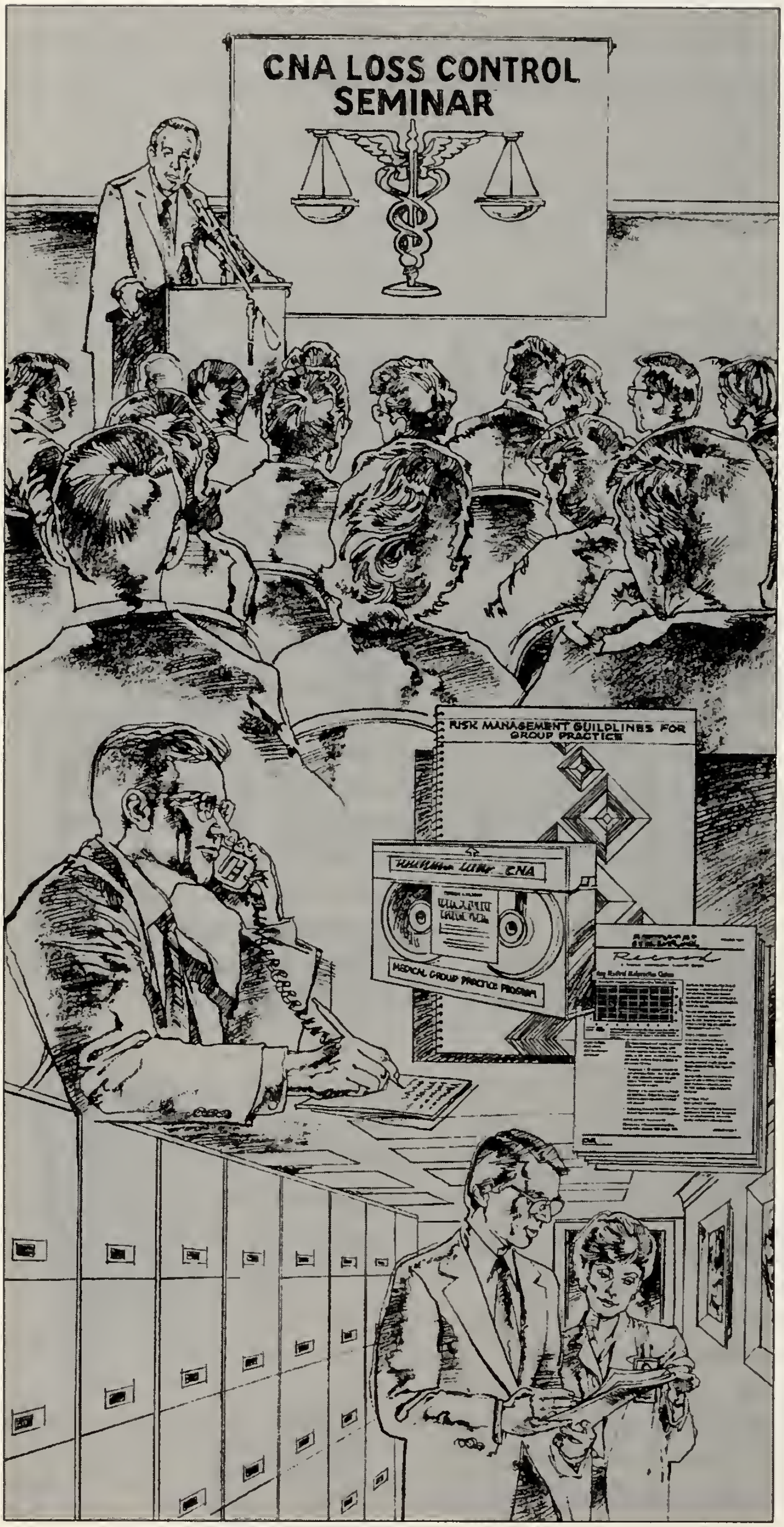
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The House of Medicine

Frederick Hahn, MD, MSMA President

On the 1st of November, I had the opportunity to visit the Buchanan County Medical Society and to speak at their banquet which just happened to be the annual conjoined meeting with the St. Joseph Bar Association.

Among the first people I met that evening was MSMA Past President Gary Dyer. Early in our exchange of comments, he asked, "What is the current status of The House of Medicine?" Caught by surprise, I gave some off the cuff noncommittal response.

Since then I have thought a lot about your question, Gary! Frankly, I would be afraid to have Benjamin Franklin make an in depth assessment of The House of Medicine for fear of what he might say.

We **are divided** in more ways than I can count or conceive. First, we are divided by whether we have been purchased and are under contract to some managed system (or hospital) or are in private practice.

Second, we are divided into exclusive organizational conglomerates hoping to give us clout while not tilting the antitrust alarm (IPAs, HPOs, specialty group mergers).

Third, we are divided into primary care physicians (GPs, FPs, internists, pediatricians, obstetricians, and gynecologists) and specialists (all others).

Fourth, we are divided as to whether we are hospital-based (radiology, anesthesiology, pathology, and emergency services) or office-based.

Fifth, we are divided by the different third party payer panels with which we have contracted.

Sixth, we are divided as to whether we participate or do not participate in Medicare and Medicaid.

Seventh, we are divided between town (private practice) and gown (university).

Eighth, we are divided by the hospital staffs to which we belong.

Ninth, we are divided into "gate keepers" and consultants.

Tenth, we are divided into fee-for-service and capitated providers.

In addition to the above, we are divided by our philosophical differences such as being public health versus individual patient oriented; preventative medicine verses problem solving oriented and perhaps most divisive, whether we are **compassion** or **bottom line** driven.

To Gary and Mr. Franklin I would say our many divisions **are** threatening The House of Medicine with a great fall.

Early on in my life, I was told the difference between a window and a mirror is the backing of but a thin layer of silver. If there was ever a time for those of us in medicine to look **through** the glass clearly, it is now!

The membership in the components of our Federation (county societies, state associations and AMA) are decreasing. Our commonality is rapidly being torn away. We, in The House of Medicine, have urgent need of mustering around our central purpose, that being the health of the citizens of the State of Missouri.

If we are looking into the glass and seeing only the reflection of **ourselves, our specialty, our hospital, our managed care organization and our practice orientation,** the outcome is eminent.

Come let us reason together with a clear vision through the glass toward those whom we serve!

There has never been a more important juncture in which to both support our medical Federation and to encourage our colleagues to do the same. MoMed

Poignant Pearls From the Past

Wilfred E. Wooldridge, MD - Springfield, Missouri

Marvelous attributes are: 1) a closed mouth; 2) an open ear; and 3) a retentive memory. Throughout the years I have tried to qualify on numbers 1 and 2. I believe I have also done reasonably well with number 3. Even so, I can recall only a small fraction of the many priceless remarks of my colleagues. Those remarks should not be discounted! They reflect vast and invaluable wisdom from the trenches. Throughout the crucible of toil and travail those friends were somehow able to keep level keels under trying and difficult conditions and view the proceedings with humor. That's not always easy.

The following is a list of what I remember:

An Orthopedist:
"All I could do for him was oil his wheelchair."

A Bitter Internist:
"Never, never irritate your banker or your dentist."

An Elderly Surgeon Meeting a Friend:
"Excuse me for not remembering your name. The mind goes first. On my bad days I can't even remember who I am, and it's probably just as well."

A Philosophical Internist:
"As I look back on my practice I come to the same conclusion, I think applies to anyone who deals with the public. Three percent of patients cause ninety-seven percent of the headaches."

A Fine, Old Family Doctor:
"When to send Grandpa or Grandma to the nursing home? That was always one of the knottiest problems until I found how to solve it. The old folks were happier under their own roofs than anyplace else so I left them just as long as I could possibly justify it. Then I left them a little longer. Invariably, something would happen to make the decision an easy one. Doing it that way usually got the family off my back."

A Splendid Internist Back in Neanderthal Times:
"A long time ago I found how I could almost always get help with the most puzzling diagnostic problem. I would listen to the patient talk. If I let him talk long enough he would come up with some remark that would tell me what was wrong with him."

An Amused Family Practitioner: *"How is it that so-called major surgery is talked down as not all that major? Just wait until a surgeon becomes the patient. I never saw one who wasn't scared to death."*

A Reflective Obstetrician:
"All of us who deliver babies fret or fear one will be born with some congenital abnormality. I worry too, but when I think of all the left turns nature could take in prenatal development the wonderful thing to me is that a normal baby is ever born at all."

A Half-Amused Oncologist:
"There are two times in life when there are peaks in the incidence of malignancy. First, in the very young, when the immunosuppressive system isn't fully functional and, second, in the old when it's worn out."

A Fretful Internist:
"Two types of patients especially irritate me. The first remembers every word I say, plus some I didn't say, then calls on the telephone to check to be sure. The other doesn't remember anything, then calls on the telephone because he forgot."

In Memory of Rose

The Missouri State Medical Association lost a dedicated employee October 14, 1995, when Rose A. Mahon died unexpectedly of pneumococcal meningitis. She was 57.

Rose worked as office manager for the MSMA for 26 years. She received recognition for 25 years of service during the Annual Meeting in Kansas City, April 1994. Rose was responsible for much of the daily and future planning activities of the association.

She is survived by her husband, Wayne, a daughter, a son and four grandchildren.

An Equally Fretful Dermatologist:
"If ever I commit a homicide it will be that time when, once too often, some jackass tells me, 'Skin patients never die and never get well.'"

An Orthopedist, Sadly Shaking His Head:
"I am convinced there will be a little hottest corner in hell reserved for people who design women's shoes."

An Excellent Teacher in Medical School:
"One of the worst things to happen to me in lecturing came about many years ago. 'What's your problem,' I asked a new patient. 'Doctor,' he replied, 'I have something wrong with my esogaphus.' That haunts me! I can't afford that mistake and every time I come to that word I have to think about it."

A Tired, Good Family Doctor:
"There are times when I am taught, all over again, the only infallible, foolproof, 100 percent asset I have is hindsight."

An Internist Who Has Observed A Lot:
"There are doctors who are never sued and there are doctors who are sued regularly. Those who never get sued have patients who become friends. Those who are regularly sued simply have patients. There are probably exceptions, but they are few." MoMed

Notice of Redemption of MSMA Subordinated Notes

The Central Trust Bank serves as Trustee of the Missouri State Medical Association Trust. The purpose of the Missouri State Medical Association Trust is to redeem the Subordinated Notes issued by the Missouri State Medical Association.

In 1978, the Missouri State Medical Association issued Subordinated Notes to physicians who purchased professional liability insurance through MOMEDICO. The Subordinated Notes were issued in various denominations, were non-interest bearing, and are being redeemed for the amount paid by the purchaser.

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For those Note holders who would rather claim a federal income tax deduction in the form of a charitable contribution than receive payment, Notes may be donated to the Missouri State Medical Foundation, which provides loans to Missouri medical students. Please inform Mr. Dulle if this is your desire and he can provide details.

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Contracting With Managed Care

Rick Watters, JD and Stu Vogelsmeier, JD

Health care reform will likely increase the role of managed care in health care delivery. Therefore, physicians will need to be knowledgeable of the terms of their managed care contracts if they want to remain competitive. The relationship between physicians and managed care companies typically begins when the managed care company's form contract is presented to the physician. Many physicians find little negotiation room with respect to the terms of the contract other than the reimbursement rate(s). Once the rate is negotiated, they sign the agreement unaware of the effect or meaning of many of the other provisions of the contract, some of which will have greater impact on their net reimbursement than the rate. This article will attempt to identify some of the more common provisions of these contracts that physicians should be wary of and what they might do in response thereto.

Who are the contracting parties?

Is the other party to the contract the actual payor or is it merely a coordinator, third party administrator or a "silent PPO?" A silent PPO is nothing more than a broker seller of discounts. They have no insureds of their own but sign up providers to discount arrangements and then sell those discounts to insurance companies and other payors. Without the silent PPO, the physician would have been paid by the payor pursuant to the physician's regular billing. With a silent PPO, the payor "buys" the PPO's discount and submits payment to the physician under the PPO arrangement, even though the patient was not an insured or enrollee of the PPO. One way to protect against problems created by a silent PPO is to require that the PPO provide all enrollees with an ID card which must be presented on initiation of service.

In addition, the contract should require the PPO to provide advance notice of all payors or insureds who participate in the network. The contract should also prohibit sale of discount information.

If the contracting party is a coordinator or third party administrator ("TPA"), then the contract will most likely provide that the TPA or coordinator is not liable or responsible for payment and, except for deductibles and co-pays, the patient is also not responsible for payment. This can create a problem for the physician in the event of nonpayment, because the physician has no contractual relationship with the payor and cannot collect from the patient or the TPA. The physician can gain some protection against such arrangements by requiring that the contract contain a provision that the physician is a third party beneficiary of the contract between the coordinator/TPA and the payor and that the physician shall have the right to enforce payment obligations against the payor. The physician's contract should further provide that the coordinator/TPA will include a similar provision in its contract with the payor.

What services are covered and what are the payment mechanisms?

Many managed care contracts have language similar to the following: Physician agrees to provide Covered Services to Participants [or Members] pursuant to the terms of Payor Plans [or Payor Agreements]. Because a payor plan is typically an employer's self funded health insurance plan and a payor agree-

Continued on page 672

Continued from page 671

ment is an agreement between the employer and the TPA or the managed care plan, the physician is not likely to have a copy of the payor agreement. In addition, there are likely to be as many different plans as there are employers. Thus, there is likely to be as many different definitions of covered services and payment terms as there are different arrangements. The physician should require in his/her contract with the TPA that it provide the physician with a copy of each payor plan and a summary of key provisions including coverage, payment terms, co-pays and deductibles, pre-approval procedures, and all exclusions, limitations or conditions to coverage.

What if the payors fail to pay?

As discussed above, with third party beneficiary language the physician will be better positioned to bring a collection action against the payor. But this does not solve the problem. Many managed care contracts obligate the physician to provide services even if the payor doesn't pay and most require the physician to provide services for a specified period of time after the contract is terminated. The physician may not want to terminate the entire managed care contract just because a single payor is delinquent. It is recommended that physicians include in the managed care contract the right to terminate services for a payor in default of its payment obligations without terminating the entire agreement. Also, if a physician is required to provide services after the contract is terminated (i.e., patients currently receiving care), the contract should require payment for such continuing services.

The quid-pro-quo of discounted or risk contracts is increased volume and prompt payment. If increased volumes are promised in exchange for lower rates then build into the contract an annual accounting and if volumes do not reach the minimum guaranteed volume, the managed care company must make a lump sum per patient adjustment to its prior payments. Specific time lines should be established for payment (i.e., 30 days). Some managed care contracts lack a payment deadline while others state that they will pay within 30 days of receipt of "all required documentation." This vague statement permits them to delay payment by endless requests for additional documentation. We suggest that the contract provide that billing be performed on a form expressly identified in the agreement and payment be made within 30 days of receipt of that form.

What administrative requirements are imposed on the physician?

Most managed care contracts contain one or more paragraphs obligating the physician to abide by the plan's Utilization Review and Quality Assurance procedures, its rules, regulations, policies and procedures. They may also require compliance with enrollee identification, pre-authorization, medical review and claims processing procedures. However, in most cases, none of these are spelled out or even attached to the contract. To make things worse, if the contracting party is only a third party administrator for a number of different employer plans, there are likely to be different procedures, rules, regulations and policies for each plan. Physicians should insist on obtaining copies of all of these documents and they or their office personnel should become familiar with their terms. The contract should provide that before any new or amended policies, procedures, etc. take effect, the TPA must provide copies to the physician who then has the right to opt-out of the new terms or of the entire contract.

Payment for services provided outside of the managed care contract

Most managed care contracts permit the physician to bill a patient for noncovered services. The problem arises with covered services deemed not medically necessary. Several examples may help illustrate the problem. 1) The patient who comes to an ER but the injury/illness is not deemed life threatening. 2) The OB patient who could be discharged but wants to stay over night. 3) The surgical case, where under the particular circumstances involved, the surgery is deemed not medically necessary. One option is to fight with the managed care plan over the medical necessity of the care. This will be discussed in the next section.

The other option is to include in the contract a provision that permits the physician to bill the patient, provided the patient is warned in advance of treatment that the care may be denied by the plan as not medically necessary and, if it is, the patient agrees to be responsible for payment.

Disputes with the managed care plan

Generally, there are two types of disputes that may arise, those involving medical necessity or appropriateness of services and those involving administrative issues such as compliance with pre-authorization procedures or other rules, regulations or policies of the plan. With respect to medical necessity/appropriateness issues, the contract should provide a right of the physician to seek review of adverse decisions and a grievance process involving neutral third parties and/or provider representatives. Try and obtain a commitment for physician review by a physician in the same specialty.

For administrative disputes, most contracts provide for appeal only to the managed care plan itself. As Medicare appeals have shown, such appeals are inadequate. The first several steps of a Medicare appeal are through various levels of the carrier, the same entity that made the initial decision from which the physician is appealing. Not until Medicare appeals rise to the level of the independent administrative law judge (ALJ) does a physician receive an impartial decision on appeal. It is recommended that the dispute resolution/grievance policies of the managed care plan be reviewed to assure that it provides for independent review.

Retroactive decision making

Most managed care plans perform retrospective review of care and deny payment after the fact. Many form managed care contracts require the plan to verify coverage of a patient before any care is provided. But, even if the physician verifies coverage in advance, many contracts do not preclude the managed care plan from denying coverage after care is rendered on the grounds the patient is no longer an insured of the plan. Most plans also require the physician to obtain pre-authorization of treatment. The physician obtains that authorization but then, after care is rendered, the managed care plan rescinds its authorization and denies payment. The physician should not be the insurer of a plan's mistakes. The contract should provide that once eligibility is certified and/or authorization for treatment granted the plan/payor cannot deny payment for ineligibility, noncoverage or inappropriate/not medically necessary treatment.

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Conclusion

The above issues are only a drop in the bucket compared to the total number of issues raised in managed care contracts. Physicians need to be aware that there are issues of equal importance to the payment rate, which could significantly impact their obligations under the contract. All of the issues discussed above are negotiable and the recommendations made herein routinely accepted by many plans. Failure to scrutinize a managed care contact may subject the physician to the age old warning "let the buyer beware." MoMed

The Authors

Rick Watters and **Stu Vogelsmeier** are partners in the St. Louis law firm of Lashly & Baer, P.C. practicing in the firm's Health Law Department. Both are members of the Missouri Bar's Medical Legal Committee as well as the Health and Hospital Law Committee.

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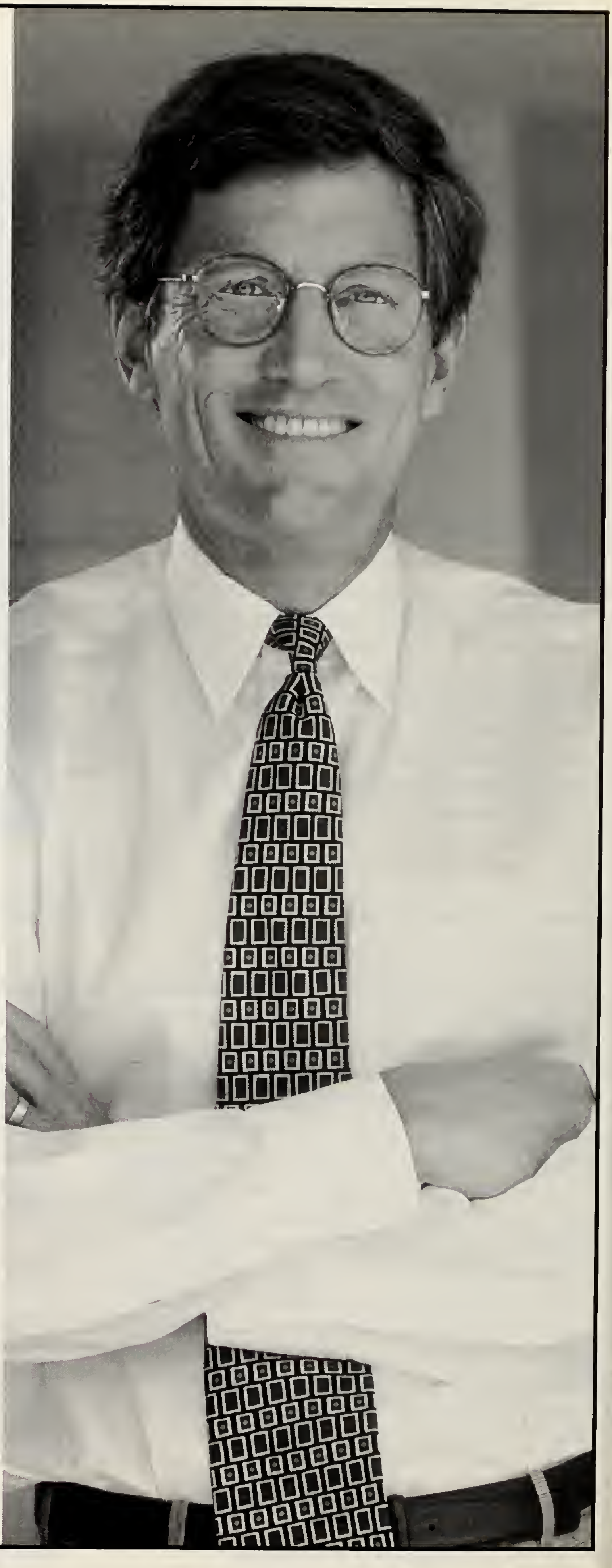

Otolaryngology Quiz #9

by David Parsons, MD, Jerry Templer, MD and Barbara Wilder, RNC, PNP
Division of Otolaryngology, University of Missouri - Columbia

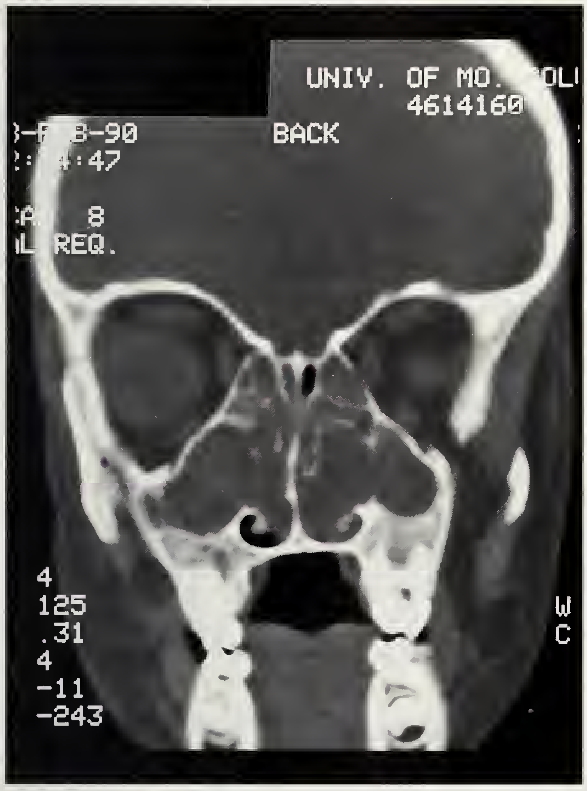

Figure 1

A six-year-old boy is brought to your office with chronic nasal obstruction, rhinorrhea and inability to smell. The patient frequently complains of facial pain and the parents have noticed halitosis at times. He has had several episodes of bronchitis and is rather small for his age. The patient underwent abdominal surgery for bowel obstruction as a neonate. Physical examination of the head and neck reveals mucopurulent rhinorrhea and edema of the mucosa which obscures the nasal airway. After decongestion and suctioning, opalescent polyps are seen in the nose. Coronal computed tomograms of the paranasal sinuses (Fig 1) demonstrate ballooned opaque sinuses and obliteration of the nasal airway. In addition to these complaints, the patient may now or in the future have:

a. Productive cough
b. Malnutrition
c. Diabetes Mellitus
d. Sterility
e. All of the above

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER: e. all of the above

This story is not pathognomonic of cystic fibrosis, but is highly suggestive. A sweat chloride measurement should be obtained without delay.

In the cystic fibrosis patient, life threatening problems of the lower respiratory tract and gastrointestinal tract overshadow disease in the paranasal sinuses. However, it is important to restore the normal physiology of the nose and paranasal sinuses whenever possible.

Normal respiratory epithelium continually secretes mucus which covers the membrane as a thin blanket. The cilia propel this blanket along the surface and through the ostia of the sinuses. This mechanism cleanses the sinuses. The mucus in cystic fibrosis is many times more viscid and the cilia cannot adequately remove it from the sinus. With time this thickened material fills the sinuses. This forms inflammatory polyps and mucoceles which balloon the medial sinus wall into the nose. The mucus is an excellent culture medium and the sinuses are continuously infected which probably is the cause of the ***nasal*** polyps, a common finding in children with cystic fibrosis.

The functions of the nose of filtration, warming and humidification of inspired air are lost. Additionally, bacterial colonization and purulent drainage from the sinuses certainly are not beneficial to the tracheobronchial tree. When the involvement of the paranasal sinuses cannot be managed with medications, surgery may be helpful although the extent of benefit is controversial. The goals of surgery are to open these mucus filled sinuses widely into the nose and to restore sinus ventilation and drainage. The nasal airway is re-established, smell is frequently restored and the opened sinuses accumulate less mucus and pus. The polyps frequently recur but a simple polypectomy removes them. The decreased sinusitis may benefit the lungs and reduce hospitalizations for treatment of pneumonia.

Table 1. The seven cardinal signs of chronic sinusitits in children

1. Chronic nasal obstruction
2. Purulent rhinorrhea
3. Post nasal drainage
4. Halitosis
5. Cough
6. Headache/facial pain
7. Behavioral changes

References

1. Jones FW, Parsons DS, Cuyler JP: *The results of functional endoscopic sinus surgery on the symptoms of patients with cystic fibrosis.*

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Membership Notes

James L. Cox, MD, Evarts A. Graham Professor of Surgery and Head of the Division of Surgery at Washington University School of Medicine, received a four-year grant from the National Heart, Lung and Blood Institute for a research project titled "Surgical Treatment of Cardiac Arrhythmias."

October Correction

Gary A. Dyer, MD, St. Joseph dermatologist and past president of the Missouri State Medical Association was elected to membership in the American Dermatological Association (ADA) not the Society.

Edwin G. Krebs, MD, winner of the 1992 Nobel Prize in Physiology or Medicine, will be among the featured speakers at a symposium Thursday, Nov. 30, at the University of Missouri-Kansas City. The symposium, "Molecular Signaling and Biological Response," is scheduled for 1-5 p.m. in White Recital Hall, Center for Performing Arts, 49th and Cherry streets. Other speakers include: Dr. Krebs will speak on "Recent Work on the Function of MAP Kinase Cascade." The lecture is free and open to the public. For more information call (816) 235-1388; (800) 735-2466; (800) 735-2966 (TT).

MSMA members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to ***Missouri Medicine****, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

AMA PHYSICIAN'S RECOGNITION AWARDS

The following physicians have completed 150 hours of continuing medical education within a three-year period. Sixty of the credit hours are earned in Category I programs.

Elizabeth J. Andrews, ***Springfield***
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Fritz A. Byrum, ***Ballwin***
Steven L. Coulter, ***Kansas City***
Gary A. Dyer, ***St. Joseph***
Sukumar Ethirajan, ***Kansas City***
Lawrence G. Evans, ***St. Louis***
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Jesus Ortiz, ***St. Joseph***
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Joe E. Spurney, ***Kansas City***
Gordon D. Stillie, ***Kansas City***
John M. Yates, ***Jefferson City***
Jay H. Yedlin, ***Kansas City***

IN MEMORIAM

Grace E. Bergner Abrams, MD, 78, Ladue, Missouri, died October 2, 1995. Dr. Abrams received her medical degree at Washington University in 1943. She also studied at Yale and Harvard universities. Dr. Abrams was a physician for 44 years. She practiced at Grant's Clinic in St. Louis for 40 years before retiring in 1978. Dr. Abrams was formerly on the staffs of Barnes, St. Luke's and Missouri Baptist hospitals. She was a former assistant professor of clinical medicine at Washington University School of Medicine. Dr. Abrams was a member of the American Society of Internal Medicine.

Wilbur P. McDonald, MD, 83, St. Joseph, Missouri, died September 15, 1995. Dr. McDonald received his masters degree in medical physiology from the University of Missouri-Columbia in 1935. He was an assistant professor in physiology from 1934-1935. He received his medical degree the University of Pennsylvania in 1937. Dr. McDonald began practice in general surgery in St. Joseph in 1938. He retired in 1981 after 43 years of practice. During World War II, he served as a major with the U.S. Army Medical Corps stationed in Oxford, England. He was a member of the Buchanan County Medical Society, Missouri State and American Medical associations, a fellow of the American College of Surgeons, and charter member and past president of the Missouri State Surgical Association. He established the Buchanan County Committee on Trauma in 1958, for the American College of Surgeons, and was former chair of the committee. He served as chief of staff at the former Methodist

Continued on page 678

Continued from page 677

Medical Center. Dr. McDonald traveled to England in 1929 as one of five Sea Scouts representing the U.S. at the World Scouting Jamboree, and had worked extensively as an adult volunteer with Boy Scouts of America. In 1985, he went to South Africa with the People to People Program. He also gave his time to the Buchanan County Tuberculosis Society, Buchanan County Welfare Board and St. Joseph State Hospital.

John F. Michaelree, MD, 77, Manchester, Missouri, died October 7, 1995. Dr. Michaelree received his medical degree at St. Louis University in 1943. He served as a physician in the Army Medical Corps during World War II. Dr. Michaelree practiced family medicine for more than 20 years in Maplewood and then moved his practice to Crestwood. He retired in 1983. Dr. Michaelree was active in the American Academy of Family Physicians for more than 40 years and was a member of the St. Louis Metropolitan Medical Society. He was active in anti-abortion groups.

Harry K. Purcell, MD, 82, Richmond Heights, Missouri died October 13, 1995. Dr. Purcell received his medical degree at the University of Pennsylvania in 1937. He served in the Army Medical Corps in the South Pacific during World War II. After the war, he was a surgeon on staff at St. Mary's Hospital (now St. Mary's Health Center), St. Louis University Medical Center and Cardinal Glennon Children's Hospital. During the 1960s, Dr. Purcell volunteered for four years as administrator and chief surgeon at the Medical Missionary Sisters' Holy Family Hospital in New Delhi, India. He was honored with the Pro Ecclesia et Pontifice Medal by the archdiocese of New Delhi. He retired in 1988. Dr. Purcell was a member of The Southwestern Surgical Congress, the American College of Surgeons and the American Society of Abdominal Surgeons.

Lowell Edwards Riller, MD, 88, Kansas City, Missouri, died September 4, 1995. Dr. Riller received his medical degree at the University of Kansas in 1934. He served the Kansas City and Independence, Missouri, area as an orthopedic surgeon for over 50 years.

Theodore E. Sanders, MD, 89, Chesterfield, Missouri, died September 7, 1995. Dr. Sanders received his medical degree at the University of Nebraska in 1933. He was in practice for 50 years before retiring in 1986. Dr. Sanders was on the clinical faculty at Washington University School of Medicine, where he was director of the ophthalmic pathology laboratory for many years. Dr. Sanders was a member of the American Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, the American College of Surgeons, and the Society of Military Ophthalmologists.

Nathan I. Simon, MD, 64, St. Louis, Missouri, died September 12, 1995. Dr. Simon received his medical degree at St. Louis University in 1955. He served as a captain in the Army at Neubrucke, West Germany, from 1958 to 1961. He then practiced obstetrics and gynecology in Lincoln, Nebraska until 1979. In 1980, he became a general practitioner on an Omaha Indian reservation in Macy, Nebraska. He serve the tribe for 15 years. Dr. Simon returned to St. Louis in April. He was a member of the American Psychiatric Association, American Physicians Fellowship, Inc., and the American Psychoanalytic Association.

Robert A. Sweet, MD, 51, Springfield, Missouri, died September 30, 1995. Dr. Sweet received his masters of pharmacology and medical degree at Creighton University in 1973. He completed his internship, residency and endocrinology fellowship at the Mayo Clinic. Dr. Sweet is the author of several articles published in numerous medical journals. He was a practicing endocrinologist and medical director of the Center of Internal Medicine. Dr. Sweet was president of the American Diabetes Association, Missouri Affiliate, director of Cox Diabetes Center, and had served on many boards in the medical community. He was instrumental in the development of one of the first dedicated endocrinology and metabolism units in a private hospital in the U.S., which served as a model for other units in hospitals throughout the country. In 1991, Dr. Sweet was the first recipient of the President's Award for exemplary service presented by the American Diabetes Association, Missouri Affiliate.

Don C. Weir, MD, 83, Webster Groves, Missouri, died September 20, 1995. Dr. Weir received his medical degree at Creighton University in 1936. He served as a colonel in the U.S. Army during World War II. After the war, he began his career at what is now St. Mary's Health Center in Richmond Heights. He was a radiologist and chief of radiology there for 32 years. Dr. Weir was on the staffs of the Veterans Administration Medical Center and of the old Firmin Desloge and Missouri Pacific hospitals. From 1969 to 1976, he was a professor and chair of radiology at St. Louis University School of Medicine. He retired in 1978. Dr. Weir was a member of the American Roentgen Ray Society, the Radiological Society of North America, and the American College of Radiology.

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Resident

Timothy A. Quinn, MD - IM

General Information

Missouri State Medical Association's 138th Annual Convention will be held April 11-14, 1996, at Tan-Tar-A Resort, Osage Beach. This Annual Convention will feature numerous activities and scientific programs in addition to the MSMA Alliance events. This is an excellent opportunity for you to participate in Continuing Medical Education.

Continuing Medical Education

The Missouri State Medical Association is accredited by the Accreditation Council for Continuing Medical Education to sponsor Continuing Medical Education activities.

The Missouri State Medical Association designates the Continuing Medical Education offerings as Category 1 or Category 2 of the Physician's Recognition Award of the American Medical Association.

The American Academy of Family Physicians will designate the scientific programs for Prescribed or Elective Credit.

Preregistration

Please complete and return the preregistration form below. Upon receipt of your form, MSMA will forward a confirmation card that is to be presented to the MSMA staff at the Convention registration desk. Your registration packet and name badge will be awaiting your arrival.

Hotel Reservations

The hotel reservation form on page 682 has been provided for your convenience in making your hotel accommodations. *Hotel reservations must be made prior to March 8, 1996.*

Preliminary Program Update

For a more detailed preliminary program, please read the December issue of *Missouri Medicine.*

Information

If you have information to include in the final preliminary program or for more information regarding Missouri State Medical Association's 138th Annual Convention, please call Mr. Ron Ellison at 314/636-5151.

MSMA Preregistration Form

The 138th Annual Convention offers a large variety of educational activities. To assist you in attending these programs, we ask that you complete and return this convenient preregistration form.

Upon receipt of your preregistration form, we will send your confirmation card which you will need to present at the Convention registration desk. Your registration packet and name badge will be awaiting your arrival.

Please return to: MSMA, 113 Madison Street, P.O. Box 1028, Jefferson City, MO 65102.
FAX: 314-636-8552.

Name (last, first, middle): ____________________

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Component Medical Society: ____________________

I will ____ will not ____ be serving as a Delegate. I am a member of AMA ____ MMPAC ____.

Preliminary Program

138th Annual Convention
April 11- 14, 1996
Tan-Tar-A Resort, Osage Beach

Thursday, April 11

10:00 a.m.	***Opening Session, MSMA House of Delegates***
11:45 a.m.	St. Louis Metropolitan Medical Society Caucus
6:00 p.m.	***Reception Honoring MSMA/ MSMAA Presidents***

Friday, April 12

8:30 a.m.	MU Alumni Organization Board of Governor's Meeting
9:00 a.m.	***MSMA General Session***
10:30 a.m.	Young Physicians' Section Meeting
10:30 a.m.	Resident Physicians' Section Meeting
11:00 a.m.	Discuss the Issues with your AMA Delegate
2:00 p.m.	St. Louis Metropolitan Medical Society Caucus
2:00 p.m.	Hospital Medical Staff Section
4:00 p.m.	***MSMA Second Session House of Delegates***
6:00 p.m.	St. Louis University University of Missouri-Columbia University of Missouri-Kansas City Washington University *Medical Alumni Receptions*
	Missouri Dermatological Society *Scientific Program*
	Mo. State Orthopaedic Association *Reception*
	Missouri Association of Plastic and Reconstructive Surgeons *Scientific Program*

Saturday, April 13

1:30 p.m.	MMPAC Meeting
	Missouri State Allergy Association/ Missouri Thoracic Society *Scientific Program*
	American Cancer Society, Missouri Division/ Missouri Chapter American College of Surgeons *Scientific Program & Committee Meeting*
	Missouri Society of Internal Medicine *Board of Directors' Meeting*
	American College of International Physicians *Scientific Program*
	Missouri State Orthopaedic Association *Business Meeting*
	Missouri Society of Pathologists *Scientific Program*
	Central Society of Physical Medicine & Rehabilitation *Scientific Program & Business Meeting*
	Mo. Association of Plastic and Reconstructive Surgeons *Board of Directors' Meeting, Scientific Program & Business Meeting*
	Missouri Radiological Society *Board of Directors' Meeting, Scientific Program, General Membership Meeting, Reception*
	Missouri Chapter American College of Surgeons/ American Cancer Society, Missouri Division *Scientific Program & Committee Meeting*
	Missouri Thoracic Society/Missouri State Allergy Association *Scientific Program*
	American Medical Women Association *Scientific Program*
6:00 p.m.	***MSMA Presidential Inauguration***
7:00 p.m.	***MSMA Reception***

Sunday, April 14

7:30 a.m.	***MSMA Final Session House of Delegates***

Hotel Reservation Form

Marriott's
Tan-Tar-A
Resort, Golf Club & Spa

• Group •
Missouri State Medical Association
April 11 - 14, 1996

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The following credit cards will be accepted for payment and deposit: American Express, Carte Blanche, Visa, Mastercard, Diner's Club and Discover Card

Reservation requests must be received no later than March 8, 1996, to guarantee accommodations; however, reservations may be accepted and confirmed up to the opening day of the convention providing accommodations are still available and the group rate is not guaranteed. Reservations are 4:00 p.m. the day of arrival until 12:00 noon the day of departure.

Requested Room Type

☐ 1 Bed ☐ 2 Beds ☐ Smoking ☐ Non-Smoking

☐ No Preference ☐ Sharing room with ______________________________

Group Rates

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3 Persons	$ 81.00
4 Persons	$ 81.00
1-Bedroom Suite	$150.00
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Current Tax	8.225%

A deposit of one night's lodging is required to confirm reservations. Deposits are refunded only when cancellation notice reaches our office 48 hours prior to arrival date. Your deposit will be forfeited if you arrive later or depart earlier than the indicated date.

Return card & deposit to:

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Reservations Department
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Fight Against Alcohol and Drug Abuse

Eileen Chalk, President Franklin-Gasconade-Warren County Medical Society Alliance

At the AMAA National Convention in June, Alliances across the country adopted S.A.V.E. (Stop America's Violence Everywhere) as a nationwide campaign. In October, over 300 physician spouses attended Confluence I, in Chicago, to kick-off the first S.A.V.E. campaign. What has been traditionally a four-day seminar on all aspects of effective leadership became a series of break-out sessions on such topics as substance abuse, the community, the media, as well as the medical family and violence.

The Alliance has the opportunity to bring about great change in our communities. The new campaign S.A.V.E. presents the Alliance with guidelines and information to make America a safe and healthy place for our children. One of the goals of the Alliance is to make America a safe and healthy place for our children. Another the goal is to convince others that we need to prevent alcohol and other drug use in order to reduce violence. As the medical community, we must take advantage of our place in the community and make a difference.

When faced with the statistics involving the use of alcohol and other drugs by children and teens, our involvement is a must. By the age of 11, children have their first experience with alcohol and other drugs. In some areas, the age is as low as 9 years old for use of tobacco, alcohol and other drugs. It is a fact that children under the age of 15 years can become addicted to substances in as little as two weeks. Alcohol is the most frequently used drug. Thirty-three percent of high school seniors binge drink on weekends. Nationwide, alcohol and other drugs play a direct role in the incidents of rape (72 %), manslaughter (68%), child abuse (64%), assault (62%), murder (54%), robbery (48%), burglary (44%), spousal abuse (50%), traffic fatality (50%) and most profoundly, adolescent death (75%).

> ***"America does not have a crime problem, a problem of job absenteeism and low productivity, does not have a teenage pregnancy problem, does not have a problem of broken homes. America has an alcohol and other drug problem."***
>
> *- George Gallup of Gallup Polls*

Maura Taylor from Greene County, Eileen Chalk from Tri-County, and Carmen Mallouk from Metro Med K.C., attended the AMA Alliance Confluence I meeting and the S.A.V.E. Today kick-off in Chicago.

"America does not have a crime problem, a problem of job absenteeism and low productivity, does not have a teenage pregnancy problem, does not have a problem of broken homes. America has an alcohol and other drug problem." George Gallup of Gallup Polls.

What will it take for us to act? Now in the 1990s we are losing our children to alcohol and other drug addiction. In the 1950s, 29 out of 100,000 young people were exposed to polio. This resulted in a massive public outcry and a call to action. They closed the swimming pools. Parents watched their children very, very carefully, keeping them away for crowds. The Salk vaccine was developed. The medical community joined together to inoculate 1,830,000 school children. Parents fought polio and won!

Today as parents we face a different epidemic that is just as crippling and as deadly as polio. But the number is not 29 in 100,000, the number is 10,000-30,000 in 100,000. And that is a conservative number. It is an epidemic 300 to 100,000 times more active than polio. We cannot run or hide from it. As medical families we need to face this issue in America. The fight against alcohol and other drug use, that results in many other problem behaviors, will be won by families. All of us - groups like the Alliance, can network and make a difference. We need to plant the seeds of prevention to overcome the cycle of violence. MoMed

S.A.V.E. Today

Nona Chapman, MSMA Alliance President

The SAVE Program to Stop America's Violence Everywhere was officially unveiled on Columbus Day, Oct. 9, 1995 at the American Medical Association Alliance Leadership meeting in Chicago.

The kick-off launchs the national year-round program to address root causes of violence in the family and media. More than 60,000 physicians' spouses around the country will take part in the program to assist victims of violence by collecting and donating items to abuse shelters, hosting educational programs for physicians and the public, promoting state and federal anti-violence legislation, and a variety of other efforts.

Here is what's happening around Missouri:

Audrain County: Donna Corrado took a stand...literally, she exhibited an anti-domestic violence booth in the Mexico Senior High School cafeteria on October 11. She encouraged students and faculty to sign a "Pledge Against Violence" and distributed information about the local shelter and cards printed by MSMAA with the 1-800 number for the shelter. "Talk to me" buttons were also placed with a note in each doctor's box at the Audrain Medical Center.

Boone County Medical Society Alliance distributed brochures to high school students to help them identify and get out of abusive relationships. Information sheets and posters were displayed throughout the schools and businesses. Members distributed business cards with shelter resource numbers at doctors' offices. Also, "Thumbs Up, Thumb's Down" postcards were given out at PTA meetings. The cards are mailed to advertisers and television stations to express concern about content.

Clay-Platte County Medical Society Alliance sold Discovery Toys^{TM} to raise money benefit for the Safehouse Women's Shelter.

Cole County Medical Society Alliance with Riverside Hospital & Counseling Center and the Business/ Education Division of Jefferson City Chamber of Commerce provided a list of crisis numbers for all middle and high school students in Cole County. The listing is on a sticker that will be placed on student identification cards, making them readily available for students to use. The numbers for Alateen, Child Abuse Hotline, Rape and Abuse Crisis Service, National Runaway Hotline, Suicide Crisis Hotline, Sexually Transmitted Disease Hotline, Cole County Health Department, Prenger Family Service and Riverside Hospital and Counseling Centers were included.

Franklin-Gasconade-Warren County Medical Society Alliance displayed abuse and shelter information on a billboard and also on the bulletin board at St. John's Mercy Hospital. Members also distributed the brochures produced by the St. Louis Metropolitan Medical Society and Alliance that warns teenagers about abusive dating relationships.

Greene County Medical Society Alliance: In recognition of SAVE Today, the Greene County Medical Society Alliance, in cooperation with The Domestic Violence Center, The Missouri Victim Center, and Ozarks Fighting Back, presented "When Being a Good Parent Is Not Enough," by Barbara Buchanan, MD, a child and adolescent psychiatrist from Kansas City, and author of several books on recognizing problem behavior in children and adolscents. The program is to help anyone involved with children to recognize the early warning signs of problems and intervene before small issues become a serious crisis. The program offers parents tools to deal with problem behavior.

Jasper County Medical Society Alliance distributed "I Can Choose" coloring books to kindergarten through third grade classes; held a poster contest for fourth through ninth grade classes; and, had a panel discussion at the high school about violence prevention and how to deal with violent situations.

Metropolitan Medical Society of Greater Kansas City kicked-off their anti-violence campaign at the November meeting with a presentation of "Squash-it" - a national youth-net model program. Members also developed a brochure on "conflict resolution" to be given out the the district student council meeting. Several other youth programs have requested the brochure so they will be looking for grant support. In January they will be using the "I Can Choose" coloring books and speaking to elementary students. Members sponsored a speaker for four breakout sessions to discuss violence issues and videorecorded sessions used for learning how young people view violence today.

Northeast Medical Society Alliance: Julie Memken plans to use puppets to address nutrition and anti-violence messages to Hannibal second graders. She will also distribute "I Can Choose" coloring books.

St. Louis Metropolitan Medical Society Alliance distributed "Talk to Me" pins in the St. Luke's emergency doctors' lounge. Members also sponsored a speaker to discuss "Surviving Adolesence."

BRIDGE:
A Community-Based Advocacy Program for Battered Women in the Emergency Department

Robert L. Muelleman, MD, FACEP, Karen M. Feighny, PhD, Colleen C. Bozard, MEd, LeeAnn Bergin, BA

Intimate violence against women has begun to receive increased attention from the medical community.[1] It is estimated that 25% of women will be physically assaulted by a partner or ex-partner during their lifetime.[2] Annually in the United States, four million women are assaulted, two million are injured[3] and 2,000 killed[4] as a result of intimate violence.

Women injured by intimate violence often seek help from physicians. Each year, more than one million women seek medical assistance for injuries caused by battering.[5] It has been suggested the emergency department (ED) is the health care location most likely to be accessed by acutely battered women;[6] however, some have suggested that the ED may be inadequate in both the recognition of battering and in proper referral.[7,8]

The American Medical Association has given recommendations on ways the medical community can respond to the problem.[9] The Council on Scientific Affairs recommends that physicians routinely screen female patients for intimate violence, validate the experience for women who have experienced intimate violence, document the episodes, and refer patients to appropriate community-based resources as soon as possible.

There is some evidence that a physician's feelings of powerlessness, loss of control, and lack of time are barriers to the recognition of and intervention for intimate violence.[10] The purpose of this paper is to describe a new program developed to address these issues in order to improve the response of the health care system toward battered women.

Needs Determination

Truman Medical Center West (TMC) is an urban county hospital located in the central portion of Kansas City, Missouri. The TMC ED evaluates about 42,000 patients over the age of 15 years annually. Two to three battered women are evaluated daily at the TMC ED which is 20% of the female patients seen. It is estimated 20% of these women will return with battering injuries within 18 months.

In the past, if a woman at the TMC ED was diagnosed as having been battered, she was given information regarding local resources available for victims of domestic violence. These resources include: hotline, shelter, outpatient group or individual counseling for adults and children, court advocacy and free legal assistance for qualified women. Because only 3-5% of battered women go directly to a shelter from the ED, most leave with little more than a piece of paper listing phone numbers for community resources. The TMC medical staff was concerned that this method for providing information was not effective. This concern led to the development of the BRIDGE program.

The BRIDGE program proposed that if the community, in the form of a volunteer advocate, met with the battered woman while she was still in the ED, there would be a greater likelihood that she would utilize the resources available. Greater use of these resources, in turn, could decrease the likelihood of repeat battering episodes.

Program Development

An emergency physician at TMC in conjunction with the executive director at a local shelter and a faculty member from the University of Missouri-Kansas City School of Medicine sought to develop the BRIDGE project. The

Continued on page 686

Continued from page 685

program received pilot funding from the Kauffman Fund for Greater Kansas City from August 7, 1995, through August 6, 1996. TMC contracted with NEWHOUSE shelter for battered women to provide a full-time program director. The program director is responsible for recruiting, training, and coordinating 15 volunteer-advocates. These advocates alternate calls so that someone is always available 24 hours a day, seven days a week. The advocates are required to have received 40 hours of training in domestic violence by the Domestic Violence Network, Inc. (DVN) and to have experience in working with victims of domestic violence. This preparation phase for the program lasted about two months.

The program director is also responsible for developing policies and procedures for the project. She has educated the hospital staff about domestic violence and, specifically, about the BRIDGE program. Educational materials for battered women have also been developed. The Social Services Department was also involved in developing policies and procedures and was available for access to services that were not directly related to domestic violence.

Program Implementation

Since October 2, 1995, all battered women identified in the ED or labor and delivery room (many injured pregnant women are evaluated in labor and delivery instead of the ED), have been offered the opportunity to meet with the advocate. If the battered woman is interested, the BRIDGE advocate is paged and will arrive at the hospital within 30 minutes. After arrival, the advocate meets privately with the woman to discuss the battering incident. She also discusses safety issues for the woman, and if applicable, her children. She educates the patient about the cycle of violence and informs her of the community resources available for her and her children. Finally, the woman is informed that the program director is available for further questions and support after leaving the hospital.

The advocate will also obtain some demographic information and at the conclusion of the interview ask for consent to allow for the tracking of the patient's use of community resources as well as repeat police calls or ED visits. The goal is to provide advocacy service to 300 women by the end of the grant year.

Program Evaluation

The program will be evaluated by measurement of utilization of community resources and repeat battering episodes for the women who visited with the advocate. This data will be compared with similar data from a historical control group of battered women evaluated in the ED prior to implementation of the BRIDGE program.

Resource utilization will be determined by the use of an already existing database. The Open Hands project, operated by the DVN, has kept a confidential computerized record of the use of community resources (hotline, shelter, outpatient counseling, and transitional housing) by individual clients. In a confidential manner, the use of community resources within two months of the ED visit by the historical control and intervention group will be compared. The project also coordinates with Legal Aid of Western Missouri to determine how many women in the intervention and historical control groups sought legal resources within two months of the ED visit. Repeat battering will be determined by documenting, again in a confidential manner, repeat police calls or repeat ED visits for battering in the six months following the initial ED visit for the intervention and historical control groups.

Although the program is too new to have evaluation results, in the first month of service, nearly 40 women have been visited by advocates and eight have gone directly to a shelter. The program has been well accepted by both the staff and clients.

Program's Future

This program is unique for several reasons. It is the first community-based, hospital advocacy program described in the literature. Others have described hospital based advocacy programs.[11-13] The advantage of a community-based program is the possibility that, in the future, several hospitals could utilize the same pool of advocates. This would be more cost effective than each hospital replicating its own advocacy program. Also, a unique aspect of the program is its wholistic, multidisciplinary approach to the issue of intimate violence. This program incorporates medical care with community resources and several academic disciplines.

Funding will be a challenge for the foreseeable future. Although grants are useful in implementing and evaluating a new program, it will be disruptive to the program to be totally dependent on annual grants. If the program is found to be effective in increasing resources utilization and decreasing repeat battering, then it is envisioned that 2 to 3 hospitals could group together to fund a pool of advocates and a program director to provide on-site consultation to the battered women in their respective institutions. Also, if successful in the ED and labor and delivery, service could be expanded to serve the needs of inpatients or patients seen in physicians' offices.

Conclusion

The need, development, implementation and evaluation of a community based advocacy program for battered women has been described. If this intervention is found to be successful, it is conceivable that expansion of the program can occur. Several hospitals could be served by a pool of domestic violence advocates. Those advocates could be used for staff education and help the hospital meet the new JCAHO requirements for the care of battered adults.[14] If health care providers are provided education and feedback about the outcome of their patients who are injured as a result of intimate violence, then, perhaps, identification and referral will improve.

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Facts About Domestic Violence

- **At least half of homicide victims are killed by people they know.**
- **Domestic violence affects as many as one-fourth of all American families.**
- **Six out of 10 couples will experience violence at some time during their marriage.**
- **Three to 4 million women are battered each year by husbands or partners.**
- **Domestic violence is the leading cause of injury to women aged 15 to 44.**
- **Women are shot and killed by their partners twice as often as women are killed by strangers.**
- **Battering is the single most common cause of injury to women in the U.S., more common than automobile accidents, muggings, and rapes by a stranger combined.**
- **Medical expenses from domestic violence total more than $5 billion annually.**

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Silent Violent Epidemic

The AMA recently reported that over 700,000 women are sexually assaulted every year in the U.S. Sexual assault continues to represent the most rapidly growing violent crime in America, claiming a victim every 45 seconds. Over 61% of female victims are under the age of 18 and three-quarters of sexual assaults are committed by someone they know. Male victims represent 5% of reported sexual assaults.

Surveys show that over 87% of Americans would choose to speak to their physician about an assault rather than anyone else. While physicians are in a unique position to identify and treat victims, fewer than 50% of sexual assaults are reported and physicians do not routinely ask patients about violence in their lives.

Two AMA commissioned panels of experts representing a broad spectrum of medical specialties have developed guidelines: *Strategies for Treatment and Prevention of Sexual Assault* and *Diagnostic* and *Treatment Guidelines for the Mental Health Effects of Family Violence*. Physicians interested in receiving copies of the guidelines or in joining the AMA Physicians' Coalition to Prevent Family Violence can call (312)464-5066.

What can physicians do to help victims of domestic violence?

The following information is from the *Missouri Coalition Against Domestic Violence Training Manual: An Anthology of Training Materials for Missouri Domestic Violence Programs*, Revised Edition, June 1993.

It is often difficult to identify domestic violence victims. Battering is usually an ongoing problem which escalates in frequency and severity. By the time a victim has injuries serious enough to require medical treatment, violence may be a long-established pattern. You should suspect domestic violence if any of the following is observed:

A. Patient admits to physical abuse.

B. Patient presents with unexplained bruises, lacerations, fractures, or multiple injuries in various stages of healing. Common sites of injury for domestic violence victims are face, head, chest, breasts, abdomen, and genitalia. Pregnant victims typically show injuries to the breasts, abdomen, and genitalia.

C. Extent or type of injury is inconsistent with explanation patient gives.

D. Substantial delay occurs between time of injury and presentation for treatment.

E. Patient describes in a hesitant, embarrassed, or evasive manner the circumstances surrounding the alleged "accident."

F. Patient repeatedly uses emergency room or other medical services. Medical history reveals many "accidents" or contains remarks by nurse or physician indicating that previous injuries were of suspicious origin. Note that victims beaten at regular intervals may come to hospital with psychosomatic or emotional complaints just before they expect another beating.

G. Family member or friend accompanies patient and insists on staying close to the patient, appears to be under the influence of alcohol or drugs, or otherwise exhibits suspicious behavior.

H. Untreated old injuries.

I. A history of prior physical abuse, either as victim or witness.

J. Injuries on area of body normally covered by clothing.

K. Injuries consistent with burns, whip-like bruises, etc.

L. Complaints of chronic pain.

M. Psychiatric, alcohol or drug abuse history in patient or spouse.

N. Depression regarding family situation; e.g. not wanting to return home, fear for safety of children.

O. Previous suicide gestures or attempts.

When abuse is suspected, many victims will confirm the diagnosis when questioned in a direct, non-threatening, non-judgmental manner. For example:

- Have you ever experienced a relationship in which you were hit, punched, kicked, threatened, or hurt in any way? Are you in such a relationship now?
- You mentioned your partner uses drugs/alcohol. How does your partner act when drinking or on drugs? Is he verbally abusive? Is he physically abusive?
- Has there been any time during your relationship when you or your partner have physically fought?
- You mentioned that your partner loses his temper with the children. How are things between the two of you?
- You seem to have some special concern about your partner. Can you tell me more? Are you fearful? Has he ever hurt you?
- Do your verbal fights include physical contact?
- Many patients tell me that they had an argument with a partner and later state they were beaten. Could this be happening to you? Are you being beaten?
- Sometimes when a partner is overprotective and as jealous as you describe, they react strongly and use physical force. Is this happening in your situation?
- I notice you have a number of bruises. Could you tell me how they happened? Did someone hit you?

There are many reasons why physicians may avoid asking about abuse and why it may seem difficult to do so initially. Among these are:

- Lack of awareness of the prevalence, means of identification, or severity of the problem and lack of recognition of the social and psychological costs of abuse.
- Thinking it is not a physician's place to intervene, or that the woman must have provoked the abuse.
- Believing identification of abuse and referral for services is not part of the physician's role.
- Not knowing how to intervene or help even if a woman is recognized as being battered.
- "Blaming the patient" and feeling frustrated or angry if the woman doesn't leave her partner (She becomes the problem for being noncompliant with the physician's timetable).
- Disbelief because the alleged assailant is present and seems very concerned and pleasant.
- Concern that discussing psychosocial issues will take an overwhelming amount of time.
- Difficulty dealing with the feelings evoked by listening to a woman describe what has been done to her. The physician may feel helpless or inadequate if he or she can't "do something" to "fix" the situation.

Thorough, well-documented medical records are essential for preventing further abuse. The records provide concrete evidence of violence and abuse and may prove to be crucial to the outcome of any legal case. If the medical record and testimony at trial are in conflict, the medical record may be considered more credible. Records should be kept in precise, professional manner and should include the following:

- Chief complaint and description of the abusive event, using the patient's own words whenever possible rather than the physician's assessment. "My husband hit me with a bat" is preferable to "Patient has been abused."
- Complete medical history.
- Relevant social history.
- A detailed description of the injuries, including type, number, size, location, resolution, possible causes, and explanations given. Where applicable, the location and nature of the injuries should be recorded on a body chart or drawing.
- An opinion on whether the injuries were adequately explained.
- Results of all pertinent laboratory and other diagnostic procedures.
- Color photographs and imaging studies, if applicable.
- If the police are called, the name of the investigating officer and any actions taken.

Photographs are particularly valuable as evidence. The physician should ask the patient for permission to take photographs. Imaging studies also may be useful. State laws that apply to the taking of photographs usually apply to roentgenograms as well.

- When possible, take photographs before medical treatment is given.
- Use color film, along with a color standard.
- Photograph from different angles, full body and close-up.
- Hold up a coin, ruler, or other object to illustrate the size of an injury.
- Include the patient's face in at least one picture.
- Take at least two pictures of every major trauma area.
- Mark photographs precisely as soon as possible with the patient's name, location of injury, and names of the photographer and others present.

For medical records to be admissible in court the doctor should be prepared to testify:

- That the records were made during the "regular course of business" at the time of the examination or interview.
- That the records were made in accordance with routinely followed procedures.
- That the records have been properly stored and their access limited to professional staff.

Continued from page 689

Optimal care for the woman in an abusive relationship also depends on the physician's working knowledge of community resources that can provide safety, advocacy, and support. If you are not already aware of the help available in your area, then take the time to become familiar with the resources. The following are shelters and services provided across Missouri:

Missouri Coalition Against Domestic Violence
331 Madison Street, Jefferson City, MO 65101
Tel: 314-634-4161; Fax: 314-636-3728

CENTRAL REGION

ACCIS - Audrain County Crisis Intervention Services
Serving Audrain, Montgomery, N. Callaway, Pike Counties
Office: 314/581-3835; Hotline: 314/581-2280

Citizens Against Domestic Violence - Sunshine House
Serving Camden, Laclede, Miller, Morgan Counties
Office: 314/346-9630; Hotline: 314/346-2238

New Start - A Domestic Violence Shelter
Serving Cooper and Howard Counties
Office: 816/882-2400; Hotline: 800/479-0522

Pulaski County Crisis Center
Serving Pulaski, Maries, Phelps, Laclede Counties
Office: 314/774-6012; Hotline: 314/774-2628

Rape & Abuse Crisis Service
Serving Cole, Gasconade, Maries, Miller, Moniteau, Morgan, Osage, S. Callaway, S. Boone Counties
Office: 314/634-8346; Hotline: 314/634-4911

The Russell House, Phelps Co. Family Crisis Services, Inc.
Serving Crawford, Dent, Maries, Phelps Counties
Office: 314/364-0579; Hotline: 314/364-0222

The Shelter
Serving Audrain, Boone, Callaway, Chariton, Cooper, Howard, Montgomery, Randolph, Saline Counties
Office: 314/875-1369; Hotlines: 314/875-1370; 800/548-2480

Coalition Against Rape and Domestic Violence
Serving Callaway County **Office: 314/642-7206**

Family Counseling Center of Missouri
Serving Boone and Cole Counties
Office: 314/449-2581

KANSAS CITY REGION

Hope House, Inc.
Serving KC Metro Area, Jackson, Cass, Platte, Lafayette
Office: 816/461-4188; Hotline: 816/461-4673

NEWHOUSE
Serving KC Metro Area, Jackson, Clay, Platte Counties
Office: 816/231-7378; Hotline: 816/241-0311

Rose Brooks Center
Serving KC Metro Area, Jackson, Cass Counties
Office: 816/623-5550; Hotline: 816/995-1000

SafeHaven
Clay, Platte, Jackson, Carroll, Caldwell, Lafayette, Cass, Ray
Office: 816/454-3581; Hotline: 800/995-1000

Project ASSIST *Serving KC Metro Area*
Office: 816/474-6750

Jackson County Victim Services Program
Serving Jackson County **Office: 816/881-3556**

Belton Victim Advocate Unit *Serving Cass County*
Office: 816/331-5522; Hotline: 911

NORTHEAST REGION

AVENUES
Serving Clark, Lewis, Marion, Monroe, Pike, Ralls Counties
Office: 314/221-2093; Hotlines: 314/221-4280; 800/678-7713

People Against Domestic Violence
Office: 314/583-8443

Victim Support Services, Inc.
Serving Adair, Knox, Lewis, Linn, Macon, Putnam, Schuyler, Scotland, Shelby, Sullivan Counties
Office: 816/665-0021; Hotlines: 816/665-1617; 800/668-1617

"Turning Point" -
Warren County Council Against Domestic Violence
Serving Franklin, Gasconade, Lincoln, Montgomery, Warren
Office: 314/456-7718; Hotline: 314/456-7233

NORTHWEST REGION

CASA, Inc.
Serving Benton, Cooper, Lafayette, Pettis, Saline, Morgan
Office: 816/827-5559; Hotlines: 800/894-1151; 816/827-5555

FAITH *Serving Henry and St. Clair Counties*
Office: 816/885-6067; 816/693-4765; Hotline: 800/885-8508

Hope Haven of Cass County
Serving Cass County **Office: 816/380-4663**

Mary Sue Fountain Abuse Shelter
Serving Caldwell, Davies, Grundy, Harrison, Linn, Livingston, Mercer, Putnam, Sullivan Counties
Office: 816/359-3297; Hotline: 800/942-0649

YWCA Shelter for Abused Women and Children
Serving Andrew, Buchanan, Clinton, DeKalb, Nodaway
Office: 816/232-4481; Hotline: 800/232-1225

Gentry/Worth Counties Help Line
Office: 816/726-5828

SOUTHEAST REGION

Casa Guadalupe
Serving Carter, Iron, Reynolds, Wayne Counties
Office: 314/663-2720

The Liberty Shelter - The Center for Family Resources
Dunklin, Mississippi, New Madrid, Pemiscot, Scott, Stoddard
Office: 314/276-5500; Hotline: 314/276-2955

Haven House, Inc.
Serving Butler, Carter, Ripley, Stoddard, Wayne Counties
Office: 314/686-4873; Hotline: 800/491-1138

Safe House for Women, Inc.
Serving Butler, Cape Girardeau, Dunklin, New Madrid, Reynolds, Stoddard Counties
Office: 314/335-7745; Hotline: 314/651-1614

Southeast Missouri Family Violence Council
Iron, Madison, St. Francois, Ste. Genevieve, Washington
Office: 314/760-0050; Hotline: 800/663-9929

Perry County Coordinated Advocacy Program
Office: 314/547-2336

Epworth Bootheel Family Learning Center
Office: 314/649-3731; 314/649-5028

ST. LOUIS METROPOLITAN REGION

ALIVE, Inc.
Serving St. Louis City, St. Louis and St. Charles Counties
Office: 314/993-7080; Hotline: 314/993-2777

St. Martha's Hall
Serving St. Louis City, St. Louis, St. Charles, Jefferson Counties
Office & Hotline: 314/533-1313

Fortress Outreach *Serving St. Louis County North*
Office: 314/921-8900

Kathy J. Weinman Shelter for Abused Women
Serving St. Louis City, St. Louis, St. Charles, Jefferson Counties
Office & Hotline: 314/423-1117

The Women's Center
Serving Lincoln, St. Louis, St. Charles, Warren Counties
Office and Hotline: 314/946-6854

The Women's Safehouse
Serving St. Louis City and County
Office and Hotline: 314/772-4535

Women's Self Help Center
Serving St. Louis City, St. Louis, St. Charles, Jefferson Counties
Office: 314/531-9100; Hotline: 314/531-2003

Family Care Health Center
Serving St. Louis City and County **Office: 314/353-5190**

Life Source Consultants
Serving St. Louis City, St. Louis and St. Charles Counties
Office: 314/385-8588; Hotline: 314/385-8686

Southside Women's Center
Serving St. Louis City & County, and counties bordering IL
Office: 314/776-6727

YWCA: Women's Resource Center
Office: 314/726-6665

LAAW - Legal Advocates for Abused Women
Franklin, Jefferson, St. Charles, Warren, Washington, St. Louis City, St. Louis & County
Office: 314/454-6944; Hotlines: 314/454-6910; 800/444-0514

Lasting Solutions Legal Services for Eastern Missouri
St. Louis extended region
Office: 314/454-6860; 800/444-0514

St. Charles Victim of Crime Assistance Program
St. Charles County
Office: 314/949-7370

St. Louis Circuit Attorney's Office - Victim Services
St. Louis City **Office: 314/622-4373**

Victim Service Council
St. Louis County **Office: 314/889-3075**

AWARE Program
St. Louis Metro East, St. Louis County, St. Charles, Jefferson
Office: 314/362-9273; Pager: 314/453-2227

Educational Center on Family Violence
St. Louis & State of Missouri **Office: 314/771-1116**

Haven *St. Louis City & N. St. Louis County*
Office: 314/837-6767

Lydia's House, Inc. *St. Louis City*
Office: 314/865-3040

RAVEN Organization for Changing Men
St. Louis City/County, Jefferson, Franklin; Edwardsville, Madison, St. Clair, IL
Office: 314/645-2492; Hotline: 314/645-2075

Social Concerns/Aging Consultants
St. Louis City & County, Jefferson, Franklin, St. Charles
Office: 314/997-7578; Hotline: 314/997-7278

SOUTHWEST REGION

The Agape House
Serving Carter, Howell, Shannon, Texas, Wright Counties
Office & Hotline: 417/934-1811

Cristos House
Douglas, Howell, Oregon, Ozark, Shannon, Texas, Wright Counties
Office & Hotline: 417/256-9255

COPE - Council for the Prevention of Family Violence
Serving Laclede, Dallas, Camden, Pulaski Counties
Office: 417/532-2885; Hotline: 417/588-9773

Family Violence Center, Inc.
Serving Cedar, Christian, Dade, Dallas, Douglas, Greene, Laclede, Lawrence, Ozark, Phelps, Polk, Stone, Taney, Texas, Webster, Wright Counties
Office: 417/837-7700; Hotlines: 417/837-7777; 800/831-6863

Harbor Lights *Stone and Taney Counties*
Office: 417/739-2118; Hotline: 800/831-6863

Lafayette House
Barry, Barton, Dade, Jasper, Lawrence, McDonald, Newton
Office & Hotline: 417/782-1772; 800/416-1772

MOSS House - Council on Families in Crisis
Serving Barton, Bates, Cedar, Dade, Vernon Counties
Office: 417/667-7171; Hotlines: 417/667-3733; 800/398-4271

Women's Crisis Center *Taney County*
Office: 417/335-5181; Hotline: 417/335-3197

Mary Shaw Butler Shelter for Hickory County
Hickory, S. Benton, E. St. Clair, N. Polk, W. Dallas Counties
Office: 417/745-2146

Lakes Country Rehabilitation
Statewide
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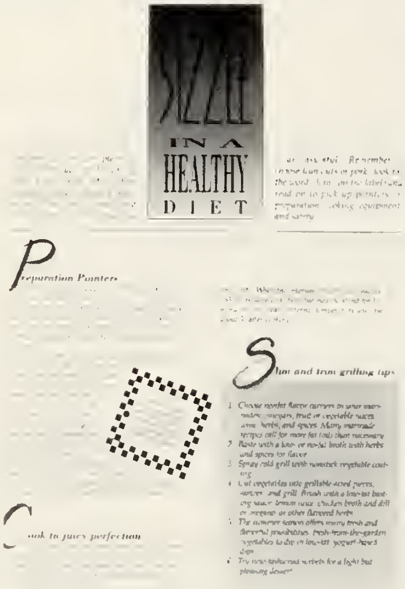

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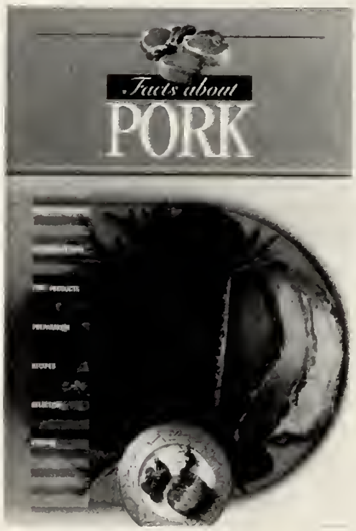

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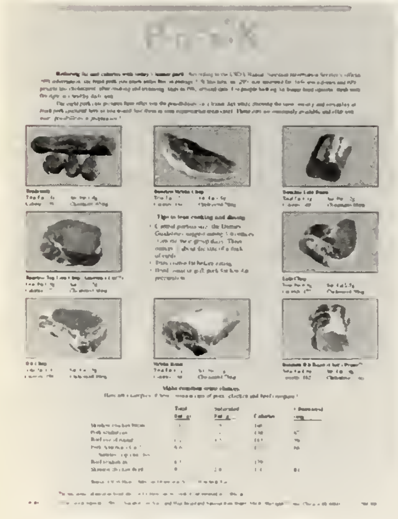

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Prostate Cancer Incidence in Missouri: An Updated Analysis

Jian C. Chang, PhD, Robert A. Hagan, MS, and Bernard R. Malone, MPA

Prostate cancer incidence increased dramatically in Missouri in the 1990s. However, this study demonstrates that the increased incidence parallels the dramatic increase in the earliest stage of the disease. Increased detection for prostate cancer is believed to play a strong role in this rising incidence. Continued surveillance for prostate cancer is necessary to determine the significance of the sharp rise in the incidence in Missouri.

Prostate cancer is the most common type of cancer among men in the U.S. and in Missouri. In 1991, the incidence surpassed that for lung cancer in Missouri. It is the second leading cause of cancer deaths among Missouri men, following lung cancer.

As reported in a recent issue of Public Health Reports,[1] prostate cancer incidence increased dramatically in Missouri in the 1990s and has increased particularly for African American men since 1991.

According to the American Cancer Society, an estimated 4,700 new cases of prostate cancer will be diagnosed in 1995, and 800 men will die from the disease in Missouri.[2]

Specific causes of prostate cancer are unknown. However, there is an approximate 10-fold difference in age adjusted mortality rates in 1983-87 between African American men and men in Hong Kong and Japan.[3] This geographical distribution of the disease suggests that both genetic and environmental factors may contribute to this variation in rates. Other environmental factors associated with prostate cancer are occupational exposures to cadmium in the workplace. Epidemiologic studies suggest that a diet high in fat increases the risk of prostate cancer.[4]

To promote the early detection of prostate cancer, the American Cancer Society recommends that men 40 and over should have a digital rectal examination as part of their regular annual physical checkup. Also the ACS recommends that men 50 and over have an annual prostate-specific antigen blood test. Any irregularities or suspicious results should be further evaluated.[2] This article describes the incidence of prostate cancer in Missouri and analyzes risk factors associated with this condition.

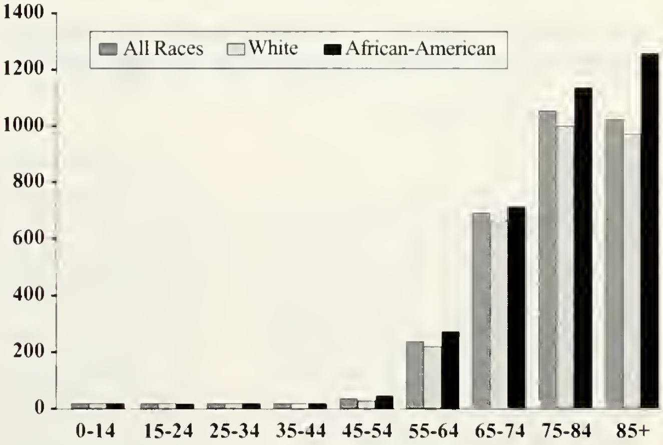

Fig 1. Prostate Cancer Age-specific Incidence Rates per 100,000, diagnosed 1985-1992 in Missouri.

Methods

Data from the Missouri Cancer Registry (MCR), maintained by the Missouri Department of Health, were used to assess trends in prostate cancer incidence from 1985 through 1992. MCR has been collecting incidence data from Missouri hospitals since 1972. In 1984 cancer became a reportable disease by law and MCR currently is 95% population-based. The primary purpose of the MCR is to provide a quality statewide data base of the incidence and prevalence of cancer. The information collected is used for examining trends in cancer in Missouri. The age adjusted incidence rates are calculated based on Missouri's 1990 census and the 1970 standard U.S. population.

For this assessment of prostate cancer incidence, MCR data were analyzed by county and the counties with the statistically significant higher incidence rates were identified.

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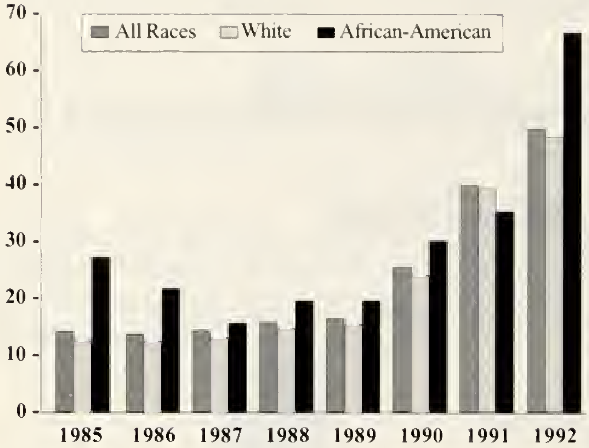

Fig 2. Prostate Cancer Age-Adjusted Incidence Rates per 100,000 Age <65 diagnosed 1985-1992 in Missouri.

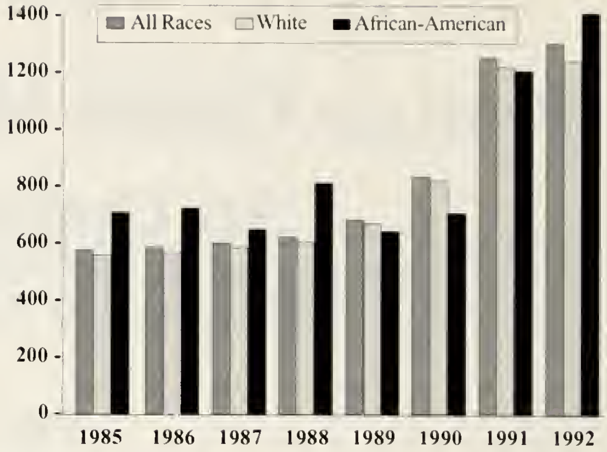

Fig 3. Prostate Cancer Age-Adjusted Incidence Rates per 100,000 Age ≥65 diagnosed 1985-1992 in Missouri.

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Results

Age-specific incidence rate

Prostate cancer is primarily a disease of older men. The mean age at diagnosis for the 21,999 patients diagnosed between 1985 and 1992 was 72.0 years. Fig 1 shows the average annual age specific incidence rates for prostate cancer in Missouri by race and the rates in both ethnic groups increase significantly with age. For white men aged 45 to 54, the age specific incidence rate is 19.7 per 100,000 and rise to 982.0 per 100,000 for age 75 to 84. Among African American men aged 45 to 54, the age specific incidence rate is 39.4 per 100,000 and increases to a rate of 1,112.4 per 100,000 for men aged 75 to 84.

Race and Age groups

Age adjusted incidence rates are higher among African American men (110.9 per 100,000) than white men (96.6 per 100,000) from 1985 to 1992 in Missouri. Fig 2 and Fig 3 show the age adjusted incidence rates for prostate cancer in Missouri, by race and age groups (age < 65 and age ≥ 65) from 1985 to 1992. For white men, the incidence rate is 22.2 per 100,000 for those under age 65 and 776.0 per 100,000 for those aged 65 and older from 1985 to 1992. For African American men, the incidence rate is 29.0 per 100,000 for those under age 65 and 858.5 per 100,000 for those aged 65 and older from 1985 to 1992. These figures demonstrate a dramatic rise in prostate cancer incidence for Missouri men in the 1990s. The overall incidence rate for all Missouri men aged 65 and over climbed from 554 per year per 100,000 population in 1985 to over 1,271 in 1992, a total of 129% increase during this period.

Race and Stage

Age adjusted incidence rates for prostate cancer diagnosed in a local stage are increasing in both white and African American men. Fig 4 and Fig 5 also present age adjusted rates for white and African American men aged 65 and over by stage in Missouri. Among whites in 1985 to 1992, 69.0% of cases were diagnosed while they were still in localized stage, versus 53.7% for African American men. This rise in the incidence of localized disease parallels the total increase observed in the prostate cancer incidence rate. The percent diagnosed at the metastasized stage in the 1985 to 1992 differed from 12.4% for whites to 23.6% for African American men and the incidence rate for this distant stage was observed to decline for both whites and African American men in the 1990s.

Prostate Cancer Mortality

As reported previously, the age adjusted mortality rates for all men have likewise steadily risen in recent years.[1] The reported average annual age adjusted prostate cancer mortality rates for Missouri is 23.3 per 100,000 in 1987-91 as compared with the U.S. prostate cancer mortality rate of 25.6 per 100,000 for the same time period.[6]

Analysis by County

An updated analysis of the prostate cancer cases form 1985 to 1992 by county shows that only St. Louis County (128.3 per 100,000) and Jackson County (125.4 per 100,000) reported age adjusted incidence rates that are statistically significantly higher than the state rate (100.4 per 100,000). Several rural counties were found to have rates lower than expected.

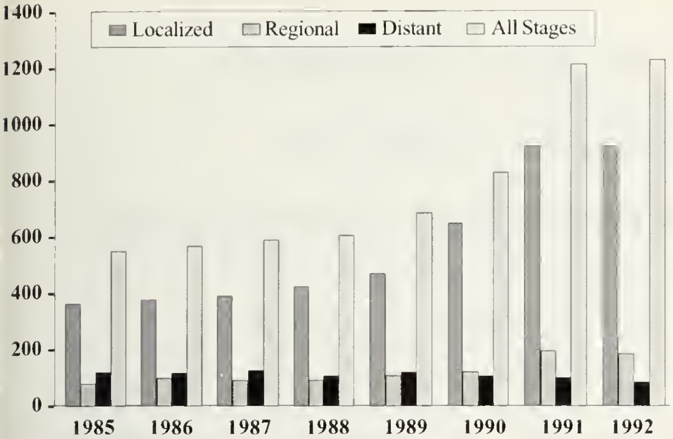

Fig 4. Prostate Cancer Age-Adjusted Incidence Rates per 100,000, Age ≥65, Whites 1985-1992 by stage in Missouri.

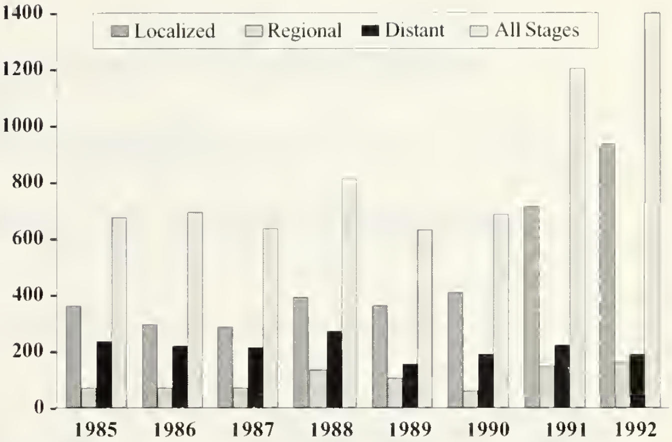

Fig 5. Prostate Cancer Age-Adjusted Incidence Rates per 100,000, Age ≥65, African American 1985-1992 by stage in Missouri.

Discussion

Age adjusted incidence rates have been rising steadily in the U.S. throughout the 1980s and into the 1990s.[6] In Missouri, the most recent dramatic rise in reported prostatic cancer incidence occurred in 1991 and continued in 1992. For white men the incidence rose from 80.2 per 100,000 in 1989 to 163.0 per 100,000 in 1992 and for African American men from 80.8 per 100,000 in 1989 to 195.0 per 100,000 in 1992. It has been reported that the rise in prostate cancer incidence is associated with the increased use of transurethral resection in medical practice as well as the result of increased prostate-specific antigen (PSA) screening.[7-9] Nevertheless, this increased incidence, especially that among elderly African American men, causes concern.[10]

Conclusion

As the Missouri population and the American society as a whole continue to age, the prostate cancer incidence will continue to increase as an important public health concern. Continued surveillance of the disease rates will be necessary to determine the significance of the sharp rise in the incidence in the 1990s in Missouri.[1]

The Missouri Department of Health recommends all men age 40 and over visit their physician annually for a physical exam, and should, in consultation with their physician, determine which screening procedures are best suited to their individual situation. Physicians and other health professionals should strongly encourage all men to be aware of the symptoms of prostate cancer, and encourage educational programs to increase public awareness of the risks of prostate cancer for older American men.

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Radiation Therapy in the Treatment of Localized Prostate Cancer: An Alternative to an Emerging Consensus

Carlos A. Perez, MD, Jeff Michalski, MD, and Mary Ann Lockett, MBA

Optimal treatment for patients with localized carcinoma of prostate is controversial. Radiation therapy is an established modality; reports indicate that results are comparable to those of radical prostatectomy.

A retrospective review was carried out of 963 patients with carcinoma of the prostate treated with definitive irradiation (65 to 71 Gy in 6.5 to 7 weeks). Survival, incidence of local recurrence and distant metastases, and postirradiation PSA data were analyzed.

Ten-year disease-free survival with external irradiation was 100% for clinical stage A1 (T1a), 69% for stage A2 (T1b,c), 57% for clinical stage B (T2), and 41% for stage C (T3). Initial PSA level closely correlated with probability of freedom from chemical failure (PSA elevation) after definitive irradiation in 317 patients with stage T1b,c and T2 tumors (96% and 89%, respectively, with initial PSA of <10 ng/ml and 75% and 65% with higher PSA levels).

Although modern irradiation techniques produce results comparable to those of radical prostatectomy in localized prostate carcinoma, we must continue to critically assess treatment policies, develop appropriately designed prospective clinical trials, and define optimal management of these patients.

Increased awareness by physicians and patients, as well as widespread use of prostate-specific antigen (PSA) studies, has substantially increased the number of patients diagnosed with carcinoma of the prostate at earlier stages.[1-3]

In a recent issue of *Missouri Medicine* an article entitled, "The Use of Radical Prostatectomy to Treat Localized Prostate Cancer: An Emerging Consensus on Treatment," was published.[4] The article by Fortune et al,[4] quoting the Arizona Study Group recommendations, stated that radical prostatectomy is an acceptable form of therapy for localized prostate cancer in men aged 60 to 69, should be the exception rather than the rule for men aged 70 to 74, and is not justifiable for patients age 75 and older. The authors further pointed out that the occurrence of radical prostatectomy in Missouri increased almost 50% during 1991 and 1992 in all age groups, including patients 75 years and older. In the same article the authors summarize the consensus of a group of distinguished practicing urologists and other clinicians who concluded that for men over the age of 75 who do not have comorbid conditions and whose life expectancy is 10 years or more, radical prostatectomy may be an acceptable treatment. Other publications[5,6] have indicated that morbidity of surgical treatment in this group of patients is significant. Thus we feel it is appropriate to present a therapeutic alternative for the treatment of these patients, in addition to watchful waiting, as has been advocated by Chodak et al,[7] Adolfsson et al,[8] and Johansson et al.[9]

The same issue contained a public health report on "Prostate Cancer in Missouri: A Trend Analysis."[10] As has been reported in the United States, the authors pointed out an increased incidence of prostate cancer in Missouri in white men from 67.1 per 100,000 per year in 1986 to 146.7 in 1991. For African-American men the rate increase was from 91.8 to 146.2 per 100,000 in 1991. Mortality rates have not risen as dramatically as incidence rates, which may be a reflection of the indolent nature of some tumors, diagnosis in earlier stages, or effectiveness of current therapy.

It is important to inform patients of the various alternative treatment options available before a decision is made regarding treatment. A consensus conference sponsored by the National Cancer Institute on Management of Carcinoma of the Prostate stated that radical prostatectomy and radiation therapy are clearly effective forms of treatment for tumors limited to the prostate for appropriately selected patients. Comparisons across studies suggest comparable 10-year survival rates with either form of management.[11]

Radiation therapy has been used in the treatment of many patients with carcinoma of the prostate, either for cure of localized disease or palliation of advanced and metastatic tumors, with satisfactory results. Over the past 50 years, a number of reports document the effectiveness of adequate irradiation in the management of patients with localized carcinoma of the prostate, with tumor control and survival rates comparable to those reported with radical prostatectomy.[12,13] Innovative computer and linear accelerator technology has spurred the use of sophisticated three-dimensional (3-D) treatment planning and conformal irradiation to increase the precision with which the prostatic volume is irradiated, sparing some of the surrounding normal tissues such as the bladder and rectum and providing a unique opportunity to deliver higher irradiation doses, which may potentially be more effective, without increasing morbidity.[14-16]

We report our experience in the definitive treatment with irradiation of a large number of patients with localized prostate cancer at a single institution.

Materials and Methods

Between January 1967 and December 1992, 963 patients with histologically proven localized adenocarcinoma of the prostate were treated with definitive radiation therapy at the Mallinckrodt Institute of Radiology (MIR) Radiation Oncology Center and affiliated hospitals. Median follow-up for all patients is 6.5 years (minimum, 2 years; maximum, 22 years). All radiation oncology records were reviewed; information was coded on computer-compatible forms and analyzed on a computer program with multiple cross-reference checks to ensure reliability of the data.

All patients had a complete physical and rectal examination, routine blood count, chemistry profile, urinalysis, and determination of serum prostatic acid phosphatase (PAP) and, since 1986, PSA. Chest x-ray, intravenous pyelogram, and radionuclide bone scan were obtained in most patients. Pretreatment bipedal lymphangiograms were performed in 287 patients, most before 1980. Later, computed tomography (CT) scanning of the pelvis and abdomen was performed in 483 patients. Cystoscopy was routinely performed; in the majority of patients the diagnosis was obtained by needle biopsy and in about 25% by transurethral resection of the prostate.

Patients were initially staged according to a modification of the American Urological Association classification of 1978[17] and restaged following the American Joint Committee (AJC) guidelines.[18] We use the clinical stage D1 designation for locally extensive tumors in the pelvis or those invading the bladder neck (AJC T4). The tumors were classified according to the degree of histologic differentiation into well, moderately, or poorly differentiated or using the Gleason scoring system.[19]

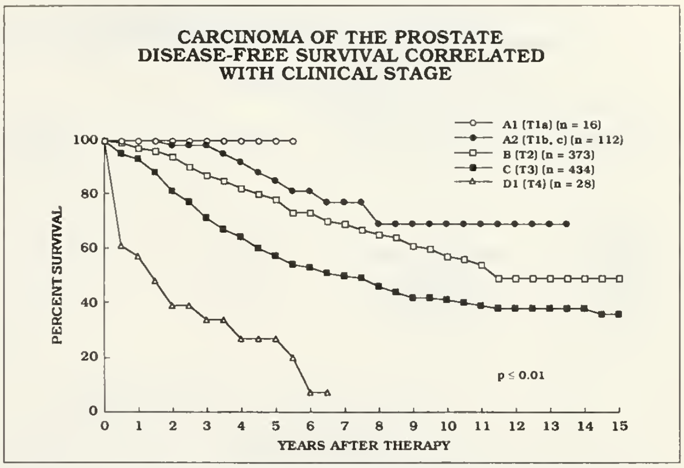

Fig 1. Disease-free survival correlated with clinical stage for 963 patients with localized carcinoma of the prostate treated at the Radiation Oncology Center, Mallinckrodt Institute of Radiology. (Perez, CA: Carcinoma of the prostate: A model for management under impending health care reform. *Radiology*, 1995;196:309.)[27]

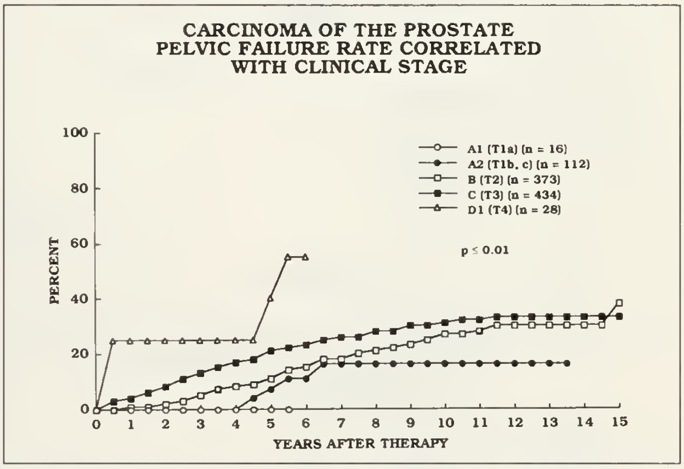

Fig 2. Pelvic failure rate correlated with clinical stage for 963 patients with localized carcinoma of the prostate treated at the Radiation Oncology Center, Mallinckrodt Institute of Radiology. (Perez, CA: Carcinoma of the prostate: A model for management under impending health care reform. *Radiology*, 1995;196:309.)[27]

Techniques of irradiation have been described previously.[20] We used stationary portals to treat the pelvic lymph nodes to 45 Gy in some patients and 240° anterior or 120° bilateral arc rotation to irradiate the prostatic volume with 2 cm margins. Total doses to the prostate in most patients were 65 to 68 Gy for A2 (T1b,c) and B (T2) and 71 Gy for stage C (T3) tumors. Daily dose of 1.8 to 2 Gy was given, five fractions per week.

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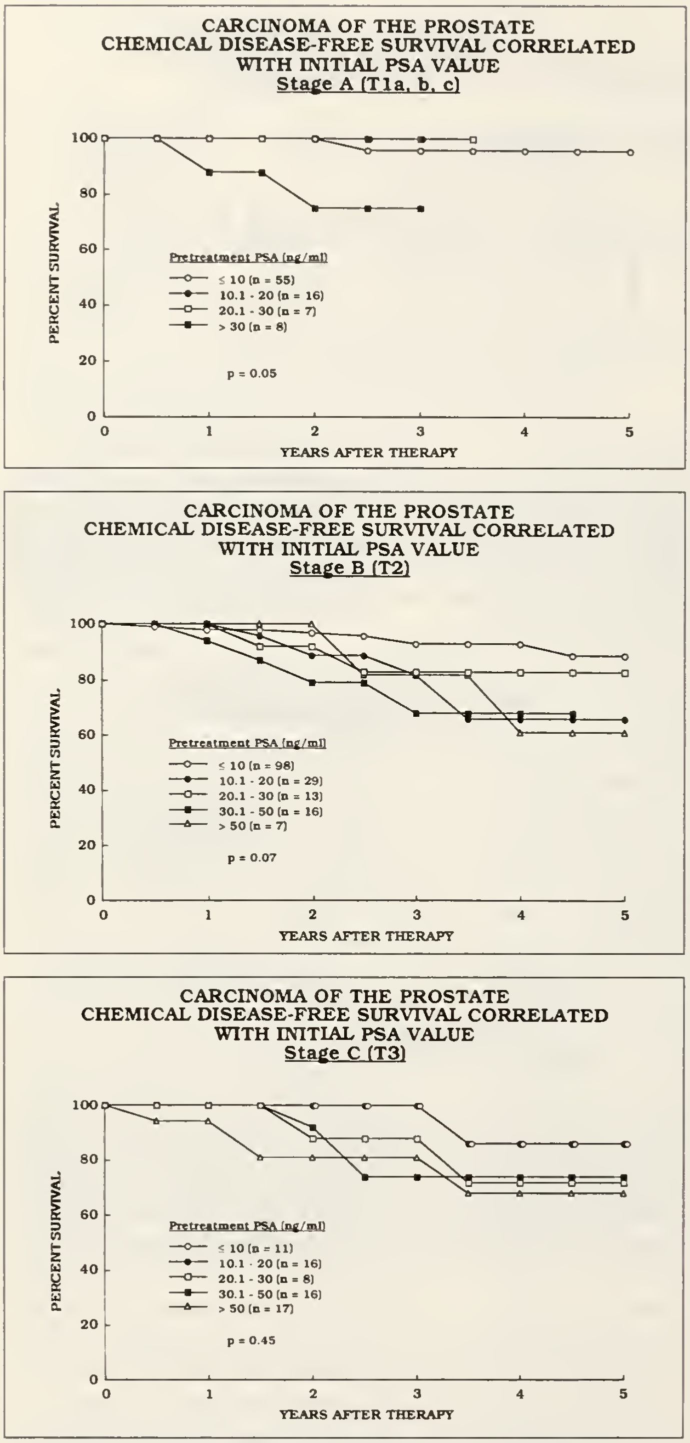

Fig 3. Chemical disease-free survival correlated with initial PSA value for stage A (T1a,b,c) (A), stage B (T2) (B), and stage C (T3) (C).

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Patients were followed up periodically during and after therapy or until death by the staff of the Radiation Oncology Center, the referring urologist, and the family physician. When this information was not available, contact was made directly with the patient or relatives. Follow-up was obtained in 98% of patients; those lost to follow-up were considered dead with disease. Tumor control was assessed by periodic rectal examination and PAP and, since 1987, with serial PSA determinations; when indicated, radiographic or radionuclide scan studies were obtained. Most patients were treated before PSA determinations were available. A group of 317 patients treated after 1986 had pre- and post-treatment PSA determinations (Tandem-R, Hybretech), and chemical disease-free survival was analyzed.

A Biomedical Department Program (BMDP) statistical package was used for computation of the data.[21,22] All survival functions use the actuarial life-table as applied by Cutler and Ederer,[23] and test statistics provided are Generalized Wilcoxon (Breslow), Generalized Savage (Mantel-Cox), and Tarone-Ware.[24,25] Trend analysis was performed by the Tarone Method.[26] The Mantel-Cox was used to test for potentially significant factors for survival.

Results

Clinical Disease-Free Survival

Disease-free survival for various stages was 100% at 8 years for 16 patients with stage A1 (T1a) (Fig 1).[27] The 10-year disease-free survival rate was 69% for patients with stage A2 (T1b,c), 57% for stage B (T2), and 41% for stage C (T3); there were no long-term survivors in a small group of patients with more advanced tumors. The cause-specific survival rate was approximately 10% higher for the various stages, as patients with pelvic failures or metastatic disease survive for prolonged periods of time. As noted by Zagars et al,[28] it is possible that disease-free survival may be higher than overall survival because in this elderly population deaths from intercurrent disease are common.

Patterns of Failure

The clinically assessed overall incidence of local recurrence after definitive irradiation is 0% for stage T1a, 4% for stage T1b,c, 13% for T2, and 22% for T3 tumors (Table 1). When the data are analyzed using actuarial methods at 10 years, the incidence of clinically detected local recurrences is somewhat higher (18% for stage T1b,c, 28% for T2, and 32% for T3 lesions)(Fig. 2).[27] These figures are comparable to the reported incidence of histologically positive routine postirradiation prostate biopsies.[29,30]

Continued from page 695

The incidence of distant metastases is 15% in patients with stage T1b,c and T2 tumors and 38% in patients with T3 lesions. Distant dissemination is closely correlated with histologic degree of tumor differentiation (Gleason score) and in stage B and C tumors with pelvic tumor control.[19,20,31]

Chemical Disease-Free Survival

Chemical disease-free survival in 317 patients treated at MIR (minimum follow-up of 18 months and mean of 3 years) is shown in Fig 3. Patients are considered chemically free of disease if the posttreatment PSA level is less than 4 ng/ml or lower than the pretreatment PSA level if it was below 4 ng/ml and if there has been no evidence of rise in any of the posttreatment determinations. For patients with clinical stage A and B disease and pretreatment PSA levels of ≤ 10 ng/ml, 5-year actuarial chemical disease-free survival was 96% and 89%, respectively, in contrast to 75% and 65% with higher PSA levels. For stage C patients with PSA levels of ≤ 10 ng/ml, the 5-year chemical disease-free survival rate was 87%, and with higher PSA levels, about 60%. These results are comparable to those reported by Partin et al,[32] Stein et al,[33] and Zietman et al[34] in patients treated with radical prostatectomy. In a recent analysis of patients with clinical stage A and B (T1 and T2) disease, the 5-year chemical disease-free survival rate using ≤ 2 ng/ml as an indicator of absence of active tumor was 70%.[27]

Morbidity

An important goal in the treatment of patients with cancer is to achieve the highest locoregional tumor control and survival with the lowest possible sequelae of therapy and with good quality of life. The cumulative incidence of grade 2 (moderate) rectosigmoid morbidity was 7% at 4 years and 8% thereafter in contrast to 5% at 4 years

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Table 1. Carcinoma of the Prostate:
Patterns of Clinical Failure Correlated with Stage

Stage	No. of Patients	Patterns of Failure: Pelvic		Pelvic and Distant Metastases		Distant Metastases Only	
A1 (T1a)	16	0		0		0	
A2 (T1b,c)	112	1	(.9%)	3	(3%)	5	(4%)
B (T2)	373	30	(8%)	19	(5%)	45	(12%)
C (T3)	434	41	(9%)	54	(12%)	113	(26%)
D (T4)	28	4	(14%)	5	(18%)	12	(43%)

Table 2. Carcinoma of the Prostate:
Sequelae Correlated with Clinical Stage

	Stage: A1	A2	B	C	D1
No. of Patients	15	112	373	434	28
Rectosigmoid and Small Bowel					
Moderate (Grade 2)					
Proctitis		7 (6%)	18 (5%)	26 (6%)	1 (4%)
Enteritis		1 (.9%)	3 (.8%)	6 (1%)	
Rectal fibrosis				2 (.5%)	
Anal stricture				2 (.5%)	
Rectal ulcer		2 (2%)	1 (.3%)	1 (.2%)	
Rectal stricture				1 (.2%)	
Anal fissure			1 (.3%)		
Perianal abscess			1 (.3%)		
Anorectal telangiectasia			1 (.3%)		
Severe (Grade 3)					
Perianal abscess		1 (.9%)		1 (.2%)	
Proctitis			1 (.3%)		
Small bowel obstruction			1 (.3%)	2 (.5%)	
Urinary					
Moderate (Grade 2)					
Urethral stricture			10 (3%)	15 (3%)	
Hematuria			2 (.5%)	4 (1%)	
Cystitis		1 (.9%)	6 (2%)	4 (1%)	
Urinary incontinence			1 (.3%)	4 (1%)	
Ureteral stricture				1 (.2%)	
Severe (Grade 3)					
Vesicosigmoid fistula*			1 (.3%)		
Rectovesical fistula				1 (.2%)	
Cystitis				1 (.2%)	
Ureteral stricture			2 (.5%)	1 (.2%)	
Other					
Moderate (Grade 2)					
Subcutaneous fibrosis				2 (.5%)	
Leg/scrotal/penile edema			7 (2%)	2 (.5%)	
Impotence†		4 (4%)	36 (10%)	58(13%)	
Severe (Grade 3)					
Pubic bone necrosis			1 (.3%)		
Pelvic soft tissue necrosis			1 (.3%)		
Fatal (Grade 4)					
Radiation-induced ileitis‡				1 (.2%)	

*Sigmoid diverticulitis.
†Only patients who were potent at the time of radiation therapy were included.
‡History of aortic aneurysm and aortoiliac graft.

Continued from page 699

and 8% at 10 years for urinary sequelae. The overall incidence of sequelae is correlated with clinical stage in Table 2. The actuarial incidence of grade 3 (severe) rectosigmoid or urinary morbidity was comparable (1% at 6 years and 2% at 10 years). In patients with stage A2-B tumors the incidence of grade 2-3 rectosigmoid morbidity was similar (4%) whether or not the pelvic lymph nodes were irradiated in addition to the prostatic volume. In patients with stage C disease treated with larger pelvic fields to cover the common iliac lymph nodes (45 Gy) and the prostate with reduced fields to a total dose of 71 Gy, the incidence of grade 2-3 rectosigmoid morbidity was 10%, in comparison to 5% in patients receiving less than 45 Gy to the pelvic lymph nodes. One patient with a history of aortic aneurysm and aortoiliac graft developed radiation-induced ileitis complicated with peritonitis that was fatal. Severe proctitis and a perianal abscess requiring colostomy were noted in two patients. Three small bowel obstructions necessitated resection of the involved segments. Proctitis lasting for extended periods of time, frequently associated with varying amounts of rectal bleeding, was recorded in 5% of patients. This was usually treated with steroid small enemas, fulguration, or laser treatment. Enteritis and malabsorption syndrome with persistent diarrhea that usually responded to administration of loperamide and diet were observed in 10 patients (2.7%).

Two bladder fistulae were noted, and one patient developed severe chronic hemorrhagic cystitis with bladder contracture requiring cystectomy and ileobladder (0.4%). Two ureteral strictures occurred near the ureterovesical junction requiring surgical resection and reimplantation of the ureter. Urethral stricture was observed in 25 patients (3%); the incidence was somewhat higher with a history of transurethral resection (TURP) ($p = 0.3$). Urinary incontinence was noted in 2% of patients. Leg or scrotal-penile edema was more frequent in patients on whom staging lymphadenectomy was performed (11 of 113, 10%) than in those not surgically staged (1 of 750). The difference was statistically significant ($p \leq 0.01$).

Sexual impotence, noted to be dependent on patient age, sexual activity, and tumor stage, was recorded in 27% of patients.

Discussion

Optimal treatment for patients with localized carcinoma of the prostate is controversial. With an increasing population of men being diagnosed with prostate cancer at younger age and earlier biologic stages with better prognosis, it is extremely important to discuss with patients the various therapeutic options, including potential effectiveness and morbidity of radical prostatectomy, radiation therapy, or, in selected patients, hormone therapy or watchful waiting. Effectiveness of any therapy in localized carcinoma of the prostate is always scrutinized against the background of what many describe as a fairly indolent clinical course of disease. Whitmore[35] pointed out that the end results of treatment in these patients may be a combined consequence of host factors, tumor natural history and behavior, and therapy efficacy. He further stated there is no best treatment for all patients but rather a variety of methods, one of which is best for a particular patient and his tumor.

Fleming et al[5] recently described the results of a decision analysis model based on published data on therapy results and concluded that observation is reasonable management for patients over 75 years of age, whereas, using optimistic assumptions, either radical prostatectomy or radiation therapy offers the same therapeutic benefits to patients 60 to 65 years old with moderately or poorly differentiated tumors. Chodak et al,[7] in a pooled analysis of 828 patients in six nonrandomized studies treated with watchful waiting and delayed hormone therapy for clinically localized prostate cancer, reported a 10-year disease-specific survival rate of 87% for men with grade 1 or 2 tumors and 34% for grade 3 tumors. They concluded that initial conservative management and delayed hormone therapy is a reasonable choice for some men with grade 1 or 2 clinically localized prostate cancer and that new treatment strategies are needed for grade 3 tumors. Lu-Yao et al[36] examined chronologic and geographic trends in the use of radical prostatectomy in a selected sample of Medicare beneficiaries treated between 1984 and 1990 and found that the rate of performance of the operation increased by 5.75 times in all age groups during that period, a trend noted by Hagan et al[10]; morbidity and mortality rates were similar in the 65- to 69-year and the 70- to 74-year groups but were appreciably higher in those older than 75 years. Radiation therapy is an established modality in the management of these patients, and several reports indicate that results are comparable to those achieved with radical prostatectomy.[12,37] In an editorial Whitmore[38] pointed out that the conclusions of Fleming et al[5] challenge prevailing conceptions of many urologists and radiation oncologists regarding the effectiveness of their respective modalities in the treatment of some patients. He noted that the optimal management of clinically localized prostatic cancer may be more a matter of opinion than a fact. Similarly, Moore et al[39] provided evidence that urologists and oncologists recommend treatment consistent with their respective disciplines (surgery, irradiation, or chemotherapy), making analysis of therapy results even more complex.

Comparison of outcome after irradiation or prostatectomy is fraught with several complex factors, including bias in patient and tumor selection, staging procedures, and posttreatment evaluation methodology. In most institutions if metastatic pelvic lymph nodes are identified, patients are not considered candidates for radical prostatectomy.

Asbell et al[40] documented the impact of surgical staging on therapeutic outcome in patients with clinical stage A2 and B carcinoma of the prostate treated with irradiation in a Radiation Therapy Oncology Group study. The 5-year disease-free survival was 76% in patients with negative pelvic lymph nodes at lymphadenectomy versus 63% in those staged by radiographic imaging ($p = 0.008$). The results suggest that radiographic assessment is not accurate and that in the latter group some patients had pathologically positive lymph nodes. Hanks et al[41] corroborated this observation in a subsequent analysis of the same patients. The 5-year disease-free survival rate in patients with stage T2 (B) disease was 72% for pathologically negative and 63% for radiographically negative nodes, and in stage T3,4 (C) the rates were 64% and 44%, respectively. The overall and disease-free survival or metastatic rates were similar in patients with positive or negative radiographically assessed nodes, indicating the limitations of this procedure in correctly evaluating status of the lymph nodes.

Only one randomized study has compared definitive irradiation and radical prostatectomy in early carcinoma of the prostate. Paulson et al[42] reported on 97 patients with clinical stage A2 or B disease. While 56 patients received radiation therapy, 41 were treated with radical prostatectomy. The authors did not specify if any stratification criteria existed or satisfactorily explain why in a randomized study 59 patients were assigned to irradiation and 47 to radical prostatectomy. Also, 7 patients in the irradiated and 9 in the surgical group did not receive the prescribed treatment. Most patients failed because of bone metastases (as evidenced by an abnormal bone scan) or other distant metastases. Paulson[43] updated the results of the study; a better actuarial tumor-free survival was noted in the prostatectomy patients (76% versus 57% at 80 months). This difference did not reflect the direct effect of the local treatment and may be related to the initial distribution of the patients and tumor characteristics in the two study groups. Furthermore, serious reservations regarding the statistical analysis and validity of the data have been raised.[44] For a more thorough discussion of the merits of this trial, the reader is referred to correspondence between Hanks[44] and Paulson.[45] The results obtained with radiation therapy in this series are substantially inferior to those reported by other authors[46] and in the present review. A prospective clinical trial to compare these two modalities was in progress, but unfortunately it was terminated because of poor patient accrual.[47]

The impact of surgical staging on therapeutic outcome and the implications of comparing reported survival with radiation therapy or radical prostatectomy are illustrated in a report by Hanks et al[13] of 104 patients with clinical stage T1b or T2 carcinoma of the prostate who were surgically staged, had negative lymph nodes, and were treated with definitive radiation therapy. Clinical control of the tumor in the prostate was 96% at 5 years and 87% at 10 years. Disease-free survival rates at 5 and 10 years were 85% and 67%, respectively, and the overall survival rates, 87% and 63%, respectively. The disease-free survival and cause-specific survival (or overall survival) reported in this and many radiation therapy series, including ours, are comparable to those described with radical prostatectomy.[12,32,33,37]

The increasing use of prostate-specific antigen (PSA) has substantially altered the apparent prevalence of prostatic carcinoma, age at which the tumor is diagnosed, distribution of clinical stages, selection of patients for therapy, and posttreatment assessment of outcome.[48,49] About 60% of patients diagnosed in 1994 had clinical stage A (T1a,b,c) or B (T2) disease with pretreatment PSA of 10 ng/ml or less.[50,51] Several authors have shown a close correlation between PSA level, clinical and pathologic tumor stage, and, in conjunction with Gleason score, with incidence of metastatic pelvic lymph nodes.[52,53]

As with our patients, Zagars and von Eschenbach,[54] studied 314 patients with clinically localized prostate cancer treated with definitive radiation therapy. They reported the 4-year risk of chemical failure to be closely correlated to the initial PSA level: 5% with PSA level of 4 ng/ml or less, 20% with 4 to 10 ng/ml, and 60% to 80% with higher levels.[54] The chemical failure precedes a clinical recurrence by several years, particularly in patients with initial PSA levels of 4 to 30 ng/ml. Patients with higher PSA levels and subsequent elevation had a 33% to 44% risk of distant metastasis in less than 3 years. Patients with normal PSA values at 6 months after irradiation had a higher probability of chemical disease-free survival (84%) than patients with higher PSA values (60%) in a report of 179 patients by Chauvet et al.[55]

Continued on page 702

Continued from page 701

The chemical disease-free survival observed after definitive irradiation in patients with various PSA levels is comparable to that reported in some surgical series. In a recent analysis by Stein et al[33] of 230 patients with stage A and B tumors treated surgically, only 25% were free from chemical failure 12 years after treatment, although 60% were clinically tumor free. Partin et al[32] reported on 955 patients with clinical stage T1 or T2 tumors treated with anatomic radical retropubic prostatectomy. Seven percent (66 patients) had seminal vesicle involvement, and 7.4% (71 patients) had lymph node metastases. With an average follow-up of 53 months, 21 patients (2.2%) had local clinical progression only, 57 patients (6%) had distant metastases with or without local recurrence, and 107 (11.2%) had postoperative serum PSA levels greater than 0.2 ng/ml. At 7.5 years, the actuarial chemical disease-free survival rate was 90% in patients with preoperative PSA of 4 ng/ml or less, 70% with 4.1 to 10 ng/ml, and 56% for 10.1 to 20 ng/ml. Results are similar to those observed in 317 patients treated at our institution with definitive radiation therapy. In a report by Zincke et al,[56] in 148 surgically treated patients, 95% of those with clinical stage A1 and less than 40% with stage A2 disease had no evidence of chemical failure 15 years after surgery.

A report by Stamey et al[57] of 123 patients treated with definitive radiation therapy, 113 of whom were available for follow-up, suggested that this modality is effective only for a small number of patients. In the group of 123 men, 98 receiving external irradiation and 15 ^{125}I implantation, posttreatment PSA evaluations were performed. A total of 23 patients (20%) with a PSA of less than 1.7 ng/ml at a mean follow-up of 9 years were judged to be cured by these authors. Biopsies of the prostate were not performed. Unfortunately, as noted by Kaplan and Coleman,[58] 58 patients (51%) had a Gleason score of 7 or greater; Partin et al[53] report that these patients have a high probability of having extracapsular disease at prostatectomy (74%). Also, in the Stamey report 49 patients (42%) were classified as having stage B, 33 (35%) stage C, and 17 (15%) stage D1 tumors. This group of patients is hardly comparable to those treated with radical prostatectomy. Furthermore, patients reported by Stamey et al did not have pretreatment PSA evaluation, making it extremely difficult to compare results with those of patients treated with radical prostatectomy or radiation therapy for whom PSA values are known (a close predictor of outcome).[12,32,33]

The morbidity of definitive irradiation noted at our institution is comparable to others.[59,60] In a recent report by Jønler et al[61] using a sensitive questionnaire in 111 patients treated with irradiation, 9% stated that urinary incontinence was a problem, and 11% used a pad. Of the patients with pretherapy adequate erectile (sexual) function, 22% (15 of 68) and 41% (28 of 68) had full or partial erections, respectively, at some time after treatment. In 5% of patients urethral stricture was observed. Noteworthy, in patients treated by radical prostatectomy, Fowler et al[62] and Wasson et al[63] reported a greater incidence of these sequelae in patients treated with radical prostatectomy (use of pad in 31%, no erection post-therapy in 61%, and urethral stricture in 20%). Substantial small bowel or rectal sequelae are more frequently seen with irradiation (18%) than with radical prostatectomy.

Some authors[20,64] have observed greater local tumor control with higher doses of irradiation. In recent years, three-dimensional (3-D) treatment planning and conformal irradiation have been introduced in an effort to deliver higher tumor doses to selected (conformed) target volumes while relatively sparing adjacent normal tissues. It is anticipated that this will result in improved local tumor control, decreased incidence of metastasis, better survival, and less morbidity with improved quality of life. At Washington University/Barnes-Jewish Hospitals we began to use this innovative technique in 1991 and have treated approximately 100 patients. Preliminary analysis shows less acute morbidity with 3-D conformal irradiation.[14] These observations are similar to those of Soffen et al,[65] who described fewer acute urinary and rectal sequelae (27%) in 26 patients treated with 3-D conformal irradiation than in 20 patients (55%) irradiated with conventional techniques. Leibel et al[15] updated preliminary results in 254 patients with localized carcinoma of the prostate treated with this technique to doses ranging from 70 to 81 Gy in a dose-escalation protocol. Only 32% of patients had grade 2 or 3 acute morbidity requiring short-term medication, and only one patient (0.4%) developed a severe (grade 4) late complication. The overall 18-month actuarial PSA normalization rate was 100% in 22 patients with stage A2 and 36 patients with stage B1 tumors, 90% in 107 patients with stage B2, and 72% in 89 patients with stage C tumors. The 4-year actuarial survival rate was 91%.

Further studies are required to better determine the optimal management of patients with localized carcinoma of the prostate. A randomized study comparing radical prostatectomy or definitive irradiation and, in selected patients, even watchful waiting should be carried out. It is unfortunate that the ongoing PIVOT trial by the Veterans Administration Hospitals compares only radical prostatectomy with watchful waiting.

Some studies have shown better local tumor control, lower incidence of distant metastases, and improved disease-free survival in patients treated with neoadjuvant hormone therapy (goserelin acetate and flutamide). Pilepich et al[66] recently reported results of RTOG protocol 8610 in 455 evaluable patients with bulky stage T2b,c (B2, B3, B4, C, D1) disease randomized to receive irradiation alone (45 Gy to pelvic lymph nodes and additional 20 to 25 Gy, depending on stage, to the prostatic area) or a combination of the same radiation therapy and adjuvant hormonal therapy consisting of Zoladex (3.6 mg subcutaneously every 4 weeks) and Eulexin (250 mg po tid), both drugs started 2 months before initiation of irradiation and continued throughout the entire course of radiation therapy. With a median observation period of 2.6 years, the 4-year actuarial local failure rate was 13% in the study arm and 32% in the control arm. A lower incidence of distant metastasis was also noted in patients receiving hormonal therapy (47 of 225, 20.8%, versus 62 of 230, 26.9%) ($p = 0.05$). The actuarial clinical disease-free survival was 53% for the study arm and 41% for the control arm ($p < 0.001$). The corresponding chemical-free (PSA <4 ng/ml) survival rates were 35% for the study arm and 16% for the control arm. Overall survival differences are not statistically significant.

RTOG protocol 9202 for patients with T2b-4 disease was still accruing patients when this manuscript was submitted. Similar neoadjuvant total androgen suppression (Zoladex and flutamide for 2 months) was given before irradiation in both arms of the trial; one group received 2 years of maintenance adjuvant Zoladex.

In the current health care environment in the United States, with increasing emphasis on cost containment and managed care, it will be extremely important for urologists, radiation oncologists, and medical oncologists to jointly develop properly designed prospective protocols to determine the best management for these patients. Endpoints will be freedom from PSA failure, clinical disease-free survival, local tumor control, morbidity of treatment, and quality of life. Litwin et al[67] recently concluded that health-related and disease-targeted quality of life measures must be included in assessing outcome of care in patients with localized prostate cancer. Until these studies are performed, we will continue to treat patients based on inadequate data and biased personal opinions.

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Continued on page 704

Continued from page 703

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Early Clinical Experience with Percutaneous Cryosurgical Ablation of the Prostate

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In 1993 we started offering transrectal ultrasound-guided percutaneous cryosurgical ablation of the prostate (PCAP) as a treatment alternative for localized prostate cancer. Through 1994, 85 patients underwent PCAP and 53 had 3-6 month postoperative biopsies.

A learning curve effect was observed: 46% of early patients had positive postoperative biopsies, versus only 9% of later ones. With repeat PCAP on the early patients, currently 87% of the biopsied patients are disease free.

While longer follow-up is necessary, it appears that PCAP merits further investigation as a treatment alternative for localized prostate cancer.

Reflecting national trends, the incidence of prostate cancer in Missouri has been increasing steadily over the last decade. Between 1986 and 1991, the overall incidence rate of prostate cancer for all Missouri men more than doubled, from 69.7 per year per 100,000 population in 1986 to 149.4 in 1991. Although mortality rates increased at a more modest rate of 17% between 1986 and 1993,[1] these figures represent a major state medical problem. While the argument continues over the cause(s) of the increased incidence of prostate cancer, the fact remains that urologists and their patients are more and more frequently facing the difficult decisions involved in choosing an appropriate treatment therapy.

One treatment option currently receiving renewed attention is percutaneous cryoablation of the prostate. Cryosurgery, or destruction of abnormal tissue by freezing has been around since the mid-19th century. Theoretically, it has a number of advantages over traditional surgical removal of tissue: 1) it is a focal treatment, and therefore can minimize destruction of healthy tissue; 2) it retains vessel integrity so they continue to function as blood conduits; 3) it is possible to destroy irregular tissue surfaces that are not resectable; 4) it is minimally invasive, and therefore minimizes bleeding; 5) it leaves nerve sheaths in tact, allowing nerve regeneration; and 6) cryogenic lesions have a local anesthetic effect and are relatively resistant to infection, which aids healing and allows for possible refreezing or other further treatments if necessary.[2]

In the 1960s the first attempts were made to freeze adenocarcinomas of the prostate. Retrospective follow-up study of 196 patients who underwent prostate cryosurgery at this time found that the five year survival rate of these patients was similar to those of patients who underwent radical prostatectomy, even though the cryosurgery patients were generally poorer-risk patients.[3] In spite of these results, cryosurgery gradually fell into disuse because of problems with monitoring the freezing process which led to inaccurate placement of the cryoprobes (the needles designed to perform the freezing) and to resultant urethral and rectal freezing. Fistulas, urinary retention from sloughed tissue and incontinence from sphincter freezing were local complications that gradually led to the disuse of cryosurgery as post-surgical complications of radical prostatectomy and external beam radiation therapy were gradually reduced.

With the advent of modern imaging techniques, however, cryosurgery has been revisited as a possible treatment alternative for prostate cancer. The use of transrectal ultrasonography with prostate cryosurgery has allowed more accurate positioning of the cryoprobes, and real-time ultrasound monitoring has permitted visualization of the iceball to more accurately destroy abnormal tissue without injuring the urethra or rectum. In 1990, doctors at Allegheny Hospital in Pittsburgh began to use transrectal ultrasound-guided *percutaneous* cryosurgery to treat prostate cancer. This percutaneous procedure was less invasive than the earlier perineal technique (required for direct visualization of the prostate), and early reported results suggested considerably less morbidity associated with

Continued on page 706

Continued from page 705

this new procedure. 82.6% of these patients showed no residual disease upon biopsy three months post-operatively, and these results appeared to be still improving as they refined their operative techniques.[4] Because of their promising results, this practice sought training from Dr. Cohen et al at Allegheny General in transrectal ultrasound-guided percutaneous cryosurgical ablation of the prostate (PCAP) and began offering it as a treatment alternative for localized prostate cancer in September 1993.

Materials and Method

To be offered PCAP as a treatment alternative by this practice, biopsy and staging tests had to indicate that the patient had Stage A to C disease. Patient selection was done as accurately as possible given a clinical setting. All patients who had positive biopsies had staging pelvic CT and bone scans. If the CT scan was suspicious or the prostatic specific antigen (PSA) level was greater than 10.0 ng/ml, then the patient also underwent a bilateral pelvic lymphnode dissection. However, because this is a clinical practice and not a research institution, all tests were not done at the same institution and therefore all did not follow similar protocols. Many patients were referred by outside doctors or sought a second opinion on treatment alternatives after a needle biopsy indicating prostate cancer had already been performed. In some cases all biopsy cores had been submitted in one specimen, making it difficult to ascertain if cancer was present in one or both lobes. Furthermore, while most reports indicated the Gleason score of the submitted specimen, some only indicated if the specimen was poorly, moderately, or well-differentiated. Thus, while patients were staged according to the Whitmore-Jewett classification system, all patients who had elevated PSA levels but did not have suspicious digital rectal exams were staged as B0. Patients staged A1 or A2 were diagnosed from TUR specimen, and patients staged B1 or B2 had elevated PSA levels and palpable lesion digital rectal examinations.

Patients who were offered PCAP as a treatment alternative after staging were provided with informational materials on cryosurgery and informed that many insurance companies considered the current procedure to be investigational and therefore would not pay for the surgery and/or for the physician's services. It was also pointed out that while many urologists consider the procedure to be investigational, over 5000 of these procedures have been performed at over 100 different medical centers in the United States.[5] Possible complications, including the possible need for a second cryosurgical procedure, were discussed. They were also informed of their other treatment options, and told that radical prostatectomy was currently the treatment of choice for clearly localized prostate cancer.

Table 1. Patients Undergoing PCAP by Clinical Stage

Clinical Stage	No. of Patients	(%)
A1	1	(1)
A2	7	(8)
B0	36	(42)
B1	26	(31)
B2	12	(14)
C	3	(4)
Totals	**85**	**(100)**

After considering treatment options, 85 patients elected to undergo PCAP between September 1, 1993 and December 31, 1994. Table 1 profiles these patients by clinical stage. Patients ranged in age from 40 to 81, with a mean age of 67 years. The 81 year old was a self-referred patient with a rising PSA level who had failed radiation therapy and undergone a bilateral orchiectomy. He had read about cryosurgery and essentially demanded the procedure as a self-pay patient. Mean PSA at time of biopsy diagnosing cancer was 9.0 (range 0.6--100.0). Mean gland size at time of the procedure was 30.2 (range 11.2-91.4). Sixty-five patients received PCAP as their primary therapy, while another 16 had anti-androgen treatment as adjunctive therapy for 4 months or less prior to cryosurgery while they considered their treatment options. Three patients received hormonal ablation therapy as primary therapy for 9 months to over 2 years prior to cryosurgery, and 3 had failed prostate radiotherapy.

Prior to cryosurgery, 16 patients with pre-operative PSA's greater than 10.0 ng/l underwent a bilateral laparoscopic pathologic lymphnode dissection to exclude stage D disease, 13 by laparoscopic technique and 3 by open technique. Pre-operative instructions to the patients included a standard bowel cleansing regimen and ingestion of prophylactic antibiotics at specified intervals 12-24 hours before surgery. The PCAP procedure was done using the Cryomedical Sciences, Inc. Accuprobe System, a B&K 7.5 MHz transrectal probe for ultrasound monitoring and a urethral warming catheter. The method used was that originally described by Onik and Cohen et al.[6] The urethral warmer was first inserted. It consisted of a 20 Fr Foley catheter tip and a TUR irrigation tube connected to a Level 1 fluid warmer system. A TUR peristaltic pump then forced warm saline through the urethral warmer catheter throughout the cryoablation procedure. The prostate volume was measured using the B&K transrectal probe. Five needles

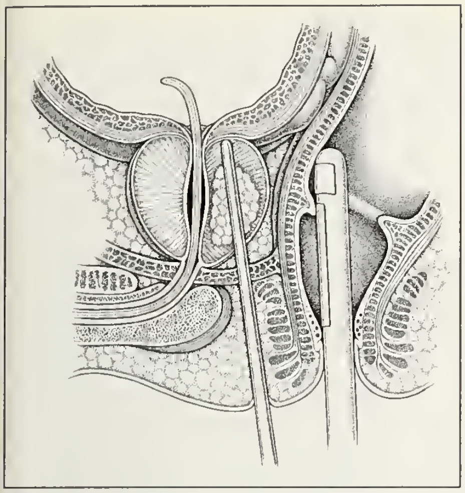

Fig 1. The urethral warming catheter and transrectal ultrasound unit are placed and then the first cryosurgical probe is inserted.

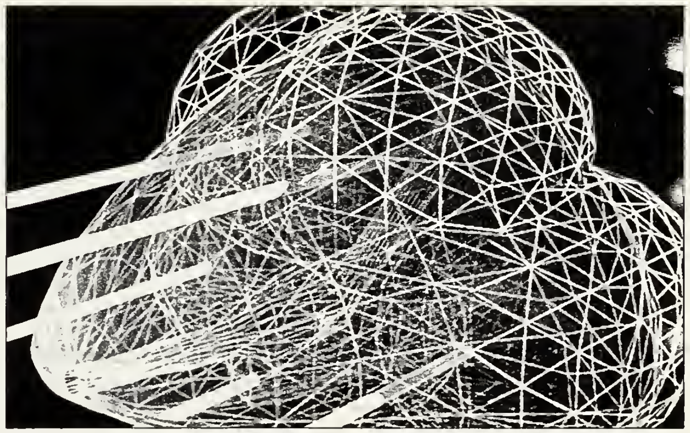

Fig 2. The 5 probes are placed percutaneously through the perineum into the prostate. Two are placed anteriorly and three are placed posteriorly, one directly under the urethra. The ice balls created by the two posterolateral probes extend out into the periprostatic tissue, eventually reaching the rectal wall. All probes are positioned so that they abut the cephalad capsule of the prostate.

were inserted in the various zones of the prostate so as to ensure complete freezing of the tumor (Fig 1 and Fig 2). Guide wires were placed through the needles and accuprobe sheath dilators were passed over the wire into the prostate and the accuprobes were placed through each sheath. All probes were placed at 100% freeze. Real time ultrasound monitoring was used to ensure that the freezing process extended down to, but did not include, the rectal mucosa. If there appeared to be residual unfrozen apical prostate tissue, the probes were pulled back and refrozen. Once the freezing appeared to be complete, the probes and the urethral warmer were removed and the patient sent to the recovery room. Patients were discharged with a suprapubic tube and given instructions as to its operation. The tube was removed 5-14 days postoperatively, whenever urinary function had returned to normal. (Only one patient required the tube for longer than a month, his was removed 60 days post-operatively.)

Results

No patients who underwent PCAP required a blood transfusion. The mean hospital stay was 1.4 days (range 1-5 days), with 62 patients requiring a one day hospital stay only. Two patients had early post-operative complications. One had a cerebrovascular accident on postop day #2 which required a 5 day hospitalization, and one had a deep venous thrombosis diagnosed 6 weeks post-operatively. There were no cases of fistulas or rectal injury. Tissue sloughing appeared to create at least one episode of urinary retention in 12 patients, and one of these patients required a one-day hospitalization 8 months post-operatively for a TUR to remove an encrusted stone of sloughed material in the urethra. Other early post-operative adverse effects were relatively minor, and all appeared to clear within 3 months. Those that affected 3 or more patients included: minor infections (12), frequency (7), scrotal edema (6), urgency (5), diarrhea (3). Urinary incontinence was initially reported by 4 patients, but it too, appeared to have cleared by 3 months post-operatively.

Continued on page 708

Table 2. Clinical Stage and 3-6 Month Postoperative Biopsy Results

	Neg Postop BX		Pos Postop BX		
Clinical Stage	No.	(%)	No.	(%)	Totals
A2	5	(100)	0	(0)	5
B0	14	(78)	4	(22)	18
B1	16	(80)	4	(20)	20
B2	5	(56)	4	(44)	9
C	1	(100)	0	(0)	1
Totals	41	(77)	12	(23)	53

Table 3. Gleason Group and 3-6 Month Postoperative Biopsy Results

	Neg Postop BX		Pos Postop BX		
Gleason Group	No.	(%)	No.	(%)	Totals
Well (1-4)	14	(93)	1	(7)	15
Mod (5-7)	25	(71)	10	(29)	35
Poor (8-10)	2	(67)	1	(33)	3
Totals	41	(77)	12	(23)	53

Continued from page 707

Table 4. Gland Size and 3-6 Month Postoperative Biopsy Results

	Neg Postop BX	Pos Postop BX	
Gland Size (cc)	No. (%)	No. (%)	Totals
30 or less	26 (76)	8 (24)	34
31-50	10 (71)	4 (29)	14
over 50	5 (100)	0 (0)	5
Totals	41 (77)	12 (23)	53

Table 5. Surgery Date and 3-6 Month Postoperative Biopsy Results

	Neg Postop BX	Pos Postop BX	
Surgery Period	No. (%)	No. (%)	Totals
before 12/31/93	7 (54)	6 (46)	13
1/1/94-3/31/94	14 (78)	4 (22)	18
4/1/94-12/31/94	20 (91)	2 (9)	22
Totals	41 (77)	12 (23)	53

Table 7. Clinical Stage and Revised 3-6 Month Postoperative Biopsy Results (Includes Rebiopsy after 2nd Cryosurgery)

	Neg Postop BX	Pos Postop BX	
Clinical Stage	No. (%)	No. (%)	Totals
A2	5 (100)	0 (0)	5
B0	15 (83)	3 (17)	18
B1	18 (90)	2 (10)	20
B2	7 (78)	2 (22)	9
C	1 (100)	0 (0)	1
Totals	46 (87)	7 (13)	53

Table 8. Gleason Group and Revised 3-6 Month Postoperative Biopsy Results (Includes Rebiopsy after 2nd Cryosurgery)

	Neg Postop BX	Pos Postop BX	
Gleason Group	No. (%)	No. (%)	Totals
Well (1-4)	14 (93)	1 (7)	15
Mod (5-7)	29 (83)	6 (17)	35
Poor (8-10)	3 (100)	0 (0)	3
Totals	46 (87)	7 (13)	53

Between 3 and 6 months post-operatively, patients underwent a serum PSA test and a mapped biopsy of the prostate. By December 31, 1994, 53 of 58 potentially eligible patients had undergone follow-up biopsies. Three patients were lost to follow-up, and 2 could not undergo biopsy due to the need for anticoagulant therapy. Outcome results by cancer stage, Gleason group, prostate gland size, and surgery date are presented in Tables 2-5 respectively.

While outcome results in these tables resemble those presented for other treatment options in that more localized prostate cancers appear to have better treatment outcomes than more extensive or poorer differentiated ones, the most notable effect observed was that of the learning curve. As seen in Table 4, short-term treatment outcomes have markedly improved as experience has been gained with the cryosurgical technique. Of the 12 patients who had positive post-operative biopsies, 8 have undergone a second cryosurgical ablation of the prostate and 6 have subsequently undergone a second 3-6 month postoperative biopsy. Five of these 6 patients had negative biopsies after their second PCAP. (One patient has been placed on hormonal therapy, and three are still considering their treatment options, including undergoing a second PCAP.) Table 6 summarizes outcome results when these repeat surgeries are included for analysis and shows that overall 87% of the patients undergoing PCAP appear to be disease free at this time. Tables 7 and 8 show outcome results by cancer stage and Gleason score respectively when rebiopsy results after the second cryosurgery are included.

Comment and Conclusions

Currently the main treatment options in the urologist's armamentarium for clinically localized prostate cancer are "watchful waiting", external beam radiation and radical prostatectomy. Our early experience with PCAP indicates that it may be an acceptable addition to the armamentarium if further long-term study upholds preliminary results. "Watchful waiting," or expectant management of localized prostate cancer, has been receiving considerable attention recently, but controversy surrounds the studies that have been carried out on this treatment option. Quality of life issues for these patients on a long-term basis have not really been addressed in these studies, and all studies show eventual tumor progression. For many patients, knowing they have prostate cancer and that it is progressing, no matter how gradually, can be a serious effect. Thus, at present "watchful waiting" is considered to be most appropriate for men with less than 10 years life expectancy and low grade, low-stage prostate cancer.[7]

Radical prostatectomy has been considered the best treatment for younger, relatively healthy men with clinically

Table 6. Summary of Outcome Results Through December 1994

	No.	%
Patients Undergoing PCAP	85	100
Patients undergoing 3-6 month postoperative biopsies	53	62
Patients with negative postoperative biopsies	41	77
Patients with positive postoperative biopsies	12	23
Patients with positive biopsy undergoing a second PCAP	8	75
Patients undergoing second 3-6 month postoperative biopsy	6	75
Patients with negative postoperative biopsy	5	83
Patients with positive postoperative biopsy	1	17
Overall Number of Patients Currently with Negative Biopsies	46	87
Overall Number of Patients Currently with Positive Biopsies	7	13

localized prostate cancer, while radiation treatment has tended to be reserved for older, less healthy men, or more clinically advanced disease. However, recent reviews of treatment outcomes and sharper definitions of outcome failure have indicated that both therapies are faring more poorly than previously reported. Disease free survival rates at 10 years for radiation therapy range from 23-76%, while those of radical prostatectomy range from 40-70%.[8] The National Medicare study of radical prostatectomy patients found 28% having follow-up treatment for cancer within 4 years of radical prostatectomy.[9] Patient selection now appears to be the primary determinant of therapy outcome, with patients having less advanced tumors exhibiting better outcome rates regardless of therapy choice. Our early experience with PCAP tends to reflect this observation. Our initial outcome results using PCAP comparing favorably with radical surgery when analyzed by clinical stage and Gleason score. Like Onik and Cohen, we found there is a learning curve to overcome, but one of the advantages of PCAP is that unlike other treatment modalities, it may be repeated. For us, this mitigated the learning-curve effect and produced good overall short-term outcome results.

The more sobering outcome results reported in the national Medicare survey may stem partially from the fact that in 50-60% of cases where the patient has been diagnosed with localized prostate cancer, subsequent pathologic analysis of the specimen has shown the cancer was understaged clinically, and in 40% of the cases, the men actually had stage C or D disease.[10,11] Cryosurgery offers the theoretical possibility, which can only be verified by further investigation, of killing the periprostatic tissue that is left behind by traditional radical surgery and that contributes to the high reported incidence of positive surgical margins in subsequent pathologic staging. It clearly offers, in our experience, a much shorter hospital stay than radical surgery and involves minimal blood loss. In addition, short-term complications have appeared acceptable when compared to those of radical prostatectomy or radiation therapy. (We are currently conducting a 1-year follow-up postoperative study to ascertain longer-term side effects, such as if and when erectile function returns.)

In summary, while we realize that our results do not issue from a rigorous, randomized clinical trial, given the current debate over the efficacy and morbidity of radical prostatectomy outside the research institution setting, it appears to us that early favorable results with PCAP indicate that it merits further investigation as a treatment alternative for localized prostate cancer, both as primary therapy and after failure of radiation therapy.

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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The subscription price per year for non-members is $60.00. Annual subscription for members is included in the annual membership dues. Single copies are $8.00 and the per copy cost of the annual August Directory is $40.00.

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Printed by the Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri 65251.

MISSOURI MEDICINE

VOLUME 92, NUMBER 12

Cover Story

Boone County Physicians Affiliate with the Republic of Georgia 752
Ted Groshong, MD, Associate Dean for the MU School of Medicine

Taking on Their Problems 754
Elizabeth James, MD

And We are Bound Together by the Task that Lies Before Us... 755
Susan Ailor, MD

They Need Supplies - *Milamari Cunningham, MD* 757
They Need Public Policy - *Jennifer Clark, MD*
They Need Our Help - *Trevor Watson, MD*

On the Cover:

Images from Tblisi, Georgia: Ted Groshong, MD, Associate Dean for the MU School of Medicine and Goga Lachkepiani, MD, President of the Georgia Medical Association signing a formal affiliation. "Children of Georgia" taken by dermatologist Susan Ailor, MD. David Edens, PhD, and his wife Virginia Edens brought toys and Tylenol to children at the Burn Center.

Guest Editorial

Providers, Insurors & Payors: How do they interact? 720
Daniel O'Sullivan, MD, MSMA President-elect

Medical Legal Issue of the Month

What's New with Peer Review? 723
Jo Anne Morrow, RN, JD

Otolaryngology Quiz #10 731
Scott Estrem, MD

Practice Management

Physician Directed Networks: The Renaissance Perspective 734
Tom Bennett, MDiv, MSW, MBA,GCG, Mike Wood, MS, MBA and Tom Allen, MD, President of Renaissance Healthcare Partners

The Preliminary Program of the MSMA 138th Annual Meeting, Lake of the Ozarks 737

Scientific Section

Medical Practice in Papua New Guinea 760
Melanie Elfrink, MD and Roy J. Elfrink

South American Warble Fly Comes to Missouri 764
Kevin J. Mott, MD and Philip C. Anderson, MD

Membership Notes 728
Alliance Message 751
Classified Listings 767

Providers, Insurors & Payors How do they interact?

An address to the Missouri Managed Health Care Association at their meeting in St. Louis, November 10, 1995

Daniel O'Sullivan, MD - MSMA President-elect

Years ago when I entered practice...1965 to be exact, there were two parties involved in the professional, personal and financial relationship of medical care. It was known as the physician-patient relationship. Even in those not-so-distant days, the patient was responsible for his or her medical care and, as much as they could, they paid for it. An individual or family would select their doctor, perhaps, go across the street to another, or come back to the original if they desired. Physicians functioned as medical care-givers, confessors, counselors, sex educators, and friends.

The rising cost of drugs, hospitalization, medical technology, and a concomitant rise in physician fees, particularly specialists, led to the entrance of a third party to the medical equation. That party was the medical insurer, who actuarily predicted risk and benefit of health insurance.

In 1966 and 1967 Medicare was approved and federal regulations were initiated. Subsequently the strip of third party participation has widened until in 1995 the relationship between physician and patient must traverse a mine field of rules and regulations, certification and utilization, gatekeeper and case manager, credentialing and recredentialling - all in the name of cost containment. We call it managed care.

What is a doctor?

Doctors of medicine are honors students from high school and the dean's list students from colleges. They were called egg-heads by their classmates, and usually (not always) missed the fraternity parties to study for their finals. There were 7,000 applicants for 128 student openings at St. Louis University Medical School last year, and the number this year is 8,000. Similar numbers are noted at Missouri's other three medical schools - Washington University, University of Missouri-Columbia and University of Missouri-Kansas City. Even in today's mine fields, bright students compete to become doctors.

Medical students enter a cave where they hibernate for two years exiting with pallor and a cerebral computer rammed with scientific information to apply to the last two years. In what is known as the clinical years of med school, students learn everything they can about their patients - their anatomy, physiology and psychology - the pace is legendary. Out of this torture a doctor is produced. He or she is a professional who is mostly caring, usually compassionate, and almost always a patient advocate ...an individual who pleads for, works for, and cries for the patient.

In 1995 post-graduate training ranges from 3 to 7 years, sometimes longer. The finished product is 30 to 32 years old before entering the practice of his or her profession, has experienced the tragedy of life, and has an average debt of $75,000 - $100,000 with which to enter practice.

I don't intend to discuss physician reimbursement any more than to ask a simple question: In the world of business, what salary would be appropriate for a person of comparable intellect, qualifications, educational background, and intense training, to perform chores and make decisions of magnitude unrelated to human life?

Physicians are not adversaries of the movement to contain medical costs. We, in organized medicine, are not assuming a position antagonistic to that of managed care. But we are in opposition to many of the policies, directives, and principles that managed care in general has assumed.

What has really caused the rise of medical cost?

It is a complex question, but the answer can be found in a few succinct categories:

1) The rising cost of technology

The addition of MRI, CT Scanning, Ultrasonography, and other complicated imaging systems is expensive and every single hospital has duplicated these services. Cardiac diagnosis including complicated computerized diagnostic systems, angioplasty, physiological mapping, stent placement, and an unbelievable expansion of cardiac surgery also finds its way into every hospital. Duplication of emergency services and capability of trauma care in every hospital makes even the least complicated emergency visit costly. The overuse of ER services for care which could be provided in outpatient settings is common.

2) Overbuilding

As mentioned, every institution must duplicate the services of its neighboring competitor. Some hospitals which were built in the 1960s have never seen a day when the construction crane was not on the premises. This continued building and expansion is paid for by the Government.

3) Defensive medicine

There is a practice of protecting the individual from missing diagnoses by not ordering tests. It is not limited to emergency rooms but also to diagnostic workup of complaints which might be well treated by a period of observation. Medical liability lies at the root of this problem.

4) Fees

Physician fees have risen as these other costs have increased, but the share of the health care dollar attributable to physicians is 19% (19 cents per $1). There is no question medical entrepreneurs have contributed to a rise in health care cost and organized medicine is struggling with the problem of unnecessary surgery, and situations of abuses of self-referral to physician-owned labs and diagnostic facilities.

5) Administration

Finally, however, the significant change in the last 30 years in the delivery of medical care is the incredible rise in administrative and paper work which accompanies the increased participation of "Third Parties" in the medical circle. The annual reapplication of physicians with re-credentialling for every managed care system is a costly and time-consuming business. Add gatekeepers, precertification, and paper work proving that the doctor really did do what he or she said was done. And also managed care profits ranging from 15% - 44% have been reported by the AMA Study on State Managed Care Trends (June 1995). Paperwork costs alone account for 25% of the medical dollar.

Physicians today, as they always have, feel that their role is to be a patient advocate. Despite the image of physicians which is being promoted by some, students do not enter medical school to become rich, but for more philanthropic and personal reasons. They believe in simple things such as doing good, helping others, and earning respect - much like the traditional horse and buggy doctors.

We want what is best for the patient. We feel we should have a greater voice in managed care, a voice that reflects the areas we know best: 1. Quality issues in medicine; 2. Optimal utilization; and 3. Credentialing of physicians.

Additionally we want to protect the patient's right to choose their own physician and we want to protect the physician against deselection without cause - an incident reportable to the National Data Bank.

Administrators lean heavily on the premise that the "best care is the least expensive care." This is usually true, in that this entails early correct diagnosis, application of appropriate course of therapy, and least complicated course to the best outcome. This does not mean however that the opposite statement is correct: the cheapest care is not the best care - because it involves selection of a course of therapy which costs less, but might not be the most appropriate, e.g. amputation vs. fem-pop revascularization.

What are doctors doing to improve the situation?

First of all, the MSMA and St. Louis Metropolitan Medical Society have been pro-active in the legislative process, putting forward bills which will accomplish some of these goals. Two years ago when Clinton's federal plan and Carnahan's state plan were proposed, the Missouri State Medical Association fought vigorously against a program we felt would be

Continued on page 722

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Robert J. Swift, Jr.
Vice President and Trust Officer

GUEST EDITORIAL, Continued from page 721

deleterious to patients and to the delivery of personal and private medical care. We subsequently proposed a bill which would provide insurance changes we felt would be pro-patient. The Health Insurance Reform Act would provide exclusion of pre-existing conditions, portability of insurance, open enrollment periods, limitation of administrative costs to 10%, and modified community rating.

We also introduced the Patient Fairness Act which would allow patients to choose their own physician; health care decisions made by patient and physician; open disclosure of what services are or are not covered; disclosure of hidden expenses and copayments; clear explanation of restriction to care; treatment or referral; autonomy of medical doctor in making medical policies; and, no deselection of physician without cause.

Physicians have cooperated voluntarily with programs of outpatient surgery (more than 50% of all hospitals cases are outpatient), decreased hospital stays, cooperated with formulary modifications and generic substitution of drugs. All physicians have throughout their careers afforded free care to indigent patients without a second thought. John Anstey, MD, past president of SLMMS and vice president of MSMA, has established local programs for teen pregnancy prevention, a syphilis awareness program, and an immunization program called "Be Wise-Immunize." Catholic charities of St. Louis contacted SLMMS for names of medical doctors who would provide managed care for Medicaid patients - 340 physicians responded.

Finally, physicians throughout the country are organizing into POs and IPAs to allow direct negotiation with employers, hospitals, insurance companies, and even managed care organizations. One such group is Renaissance Health Care in Kansas City which is comprised of 800 medical doctors - primary care, specialists and hospital-based physicians - with a financial partner for cash flow.

In summary, health care providers are struggling to adjust to the changes in health care provision and are seeking the best grounds on which to deal with managed care for the maximum benefit of our patients. MoMed

What's New with Peer Review?

Jo Anne Morrow, RN, JD

The current confidentiality and immunity protections for peer review have been in place for roughly a decade now. The State Assembly substantially revised the Missouri peer review statute in 1985 and the United States Congress passed the Health Care Quality Improvement Act in 1986. The Courts have reviewed the provisions and there is good news for the physicians and governing boards who accept the onerous responsibility of restricting or removing the privileges of a colleague whose competence or quality of care is below standard. When the statutory guidelines are followed, the Courts will protect peer review documents from discovery in a medical malpractice action and the participants from liability for damages if the disciplined physician files a lawsuit. The downside? The guidelines set a high mark. The road to victory for the peer reviewers may be an arduous one.

Missouri Law

The Missouri peer review statute protects peer review documents from discovery and provides immunity from civil damages to the participants for their actions.[1] Almost all states have enacted some form of statutory protection for peer review activities.[2] The Missouri peer review statute was enacted in 1973 and originally contained a single provision protecting members of the peer review committee and the governing board from liability in damages for any recommendation that "was made without malice and was supported by creditable evidence upon consideration of the whole record." Physicians, dentists, podiatrists and optometrists were protected under the statute. Later amendments added pharmacists, chiropractors, psychologists, nurses, social workers, counselors and mental health professionals to the list of health care professionals who fall under the protection of the statute.

The first reported court opinions interpreting the statute were the 1984 companion decisions of the Missouri Supreme Court in *State ex rel. Chandra v. Sprinkle*[3] and *State ex rel. Lester E. Cox Medical Center v. Keet.*[4] In both actions, the plaintiff in a medical malpractice case sought discovery of the documents and materials produced and used by the peer review committees concerning the medical care that was the subject of the lawsuit. In the *Cox* case the trial court permitted discovery of the peer review records. The *Chandra* court denied the plaintiff's motion to compel discovery. The Missouri Supreme Court agreed with the position taken in the *Cox* case and found that the peer review statute accorded no protection of confidentiality to documents gathered in a peer review proceeding. The Court found confidentiality a separate and distinct issue from immunity, stating, "The legislature has chosen to foster honest peer review by protecting the participants from liability rather than by declaring peer review documents to be privileged from discovery."[5]

The Missouri Legislature remedied this deficiency during its next session by adding explicit provisions to the statue regarding the confidentiality of peer review documents.[6] A year later the Missouri Supreme Court reviewed the new provisions in the context of another medical malpractice case, *State ex rel. Faith Hospital v. Enright*, and held that "the proceedings, findings, deliberations, reports and minutes of the [hospital's] peer review committees concerning the health care provided plaintiffs or any other patient are not subject to discovery by plaintiffs."[7] The Court, however, limited the privilege to requests that fall "squarely within" the protection created by the Legislature. The

Continued on page 724

Continued from page 723

Court found the hospital's credentials committee met the statutory definition of a "peer review committee" but its records would not be entitled to protection "unless they specifically concern the health care provided any patient."[8]

In a subsequent decision the Eastern District Court of Appeals reviewed the request of a medical malpractice plaintiff for all peer review committee documents related to the plaintiff's care as well as "the minutes of all meetings or conferences in the [hospital's] department of anesthesiology, obstetrics, medicine, administration, or other, as they pertain to [the plaintiff]."[9] The Court denied the request for peer review documents and found the other request overly broad because "all meetings" encompassed protected peer review meetings as well as other meetings that had no relevance to the litigation. The Court provided the following guidance on the type of documents that might not be protected:

> "[R]ecords of meetings, conferences or consultations may not be shielded from discovery merely by labeling them as meetings of a peer review committee. The statute contemplates that such a committee be a duly appointed and designated group of health care professionals assigned a specific responsibility; to evaluate, maintain and monitor the quality and utilization of health care services. Relevant meetings conducted by all other groups or for any other purpose are not protected from discovery or admission into evidence, and must be disclosed in response to a properly framed request."[10]

Federal Law

The federal government lent its support to the peer review process when it enacted the Health Care Quality Improvement Act of 1986 (HCQIA). Congress identified a need to improve the quality of medical care and "an overriding national need to provide incentive and protection for physicians engaging in effective professional peer review" as a means to achieve that end.[11] The fear of litigation was recognized as a major deterrent to the complete candor, frank discussion and constructive criticism necessary for effective peer review.

Under the HCQIA peer review participants are provided immunity from liability in damages for their actions if they satisfy four standards.[12] The action must be taken (1) in the reasonable belief that it furthers quality health care, (2) after a reasonable effort to obtain the facts of the matter, (3) after fair notice and hearing procedures are afforded to the physician involved, and (4) in the reasonable belief that the action was warranted by the facts.[13] The Act also sets forth the "safe harbor" conditions that will be deemed to meet the adequate notice and hearing requirements.[14]

The federal courts for the state of Missouri have not interpreted the HCQIA but we have indication of how the Courts might apply the Act's provisions from the recent Eight Circuit Court of Appeals decision in *Willman v. Heartland Hospital East*.[15] The events that ultimately led to the revocation of Dr. Willman's privileges began in February 1982, seven years prior to the effective date of the Act.[16]

The *Willman* decision was the culmination of a series of cases filed in state and federal court based on the actions of peer review committees at two hospitals. Peer review proceedings were initiated at Heartland Hospital East (formerly Methodist Medical Center) after two nurses expressed concern about Dr. Willman's treatment of a 19-year-old victim of a gunshot wound to the chest. After an investigation and hearings before various medical staff committees, Dr. Willman was required to obtain consultation from another surgeon for all chest trauma patients and a retrospective review of his cases was conducted. Ultimately his privileges were suspended after he refused to discuss the Medical Executive Committee's proposals.

Heartland Hospital West (formerly St. Joseph Hospital) initiated its peer review proceedings in August 1982. After a series of meetings and hearings and Dr. Willman's unwillingness to take steps to improve his surgical and medical knowledge, his privileges at St. Joseph Hospital were revoked. Additional hearings were unsuccessful in restoring his privileges and Dr. Willman filed suit against St. Joseph Hospital in the Circuit Court of Buchanan County. In December 1983 the Court ordered that his privileges be reinstated. Fourteen months later the Court of Appeals reversed the Circuit Court's order and his privileges were once again revoked.

Dr. Willman filed applications for reinstatement of his privileges at both hospitals but they were denied because he failed to provide evidence of current competence. He than filed suit in federal court against both hospitals and ten physicians who participated in the peer review proceedings, alleging antitrust violations under the Sherman Act and interference with his economic relationships with his patients.[17] The District Court granted summary judgement in favor of the defendants. The Eighth Circuit Court of Appeals affirmed the judgment in an opinion that should provide encouragement to the Missouri physicians who participate in peer review.[18]

The Court declined to decide whether Dr. Willman provided substandard care. The Court found this was "not the proper question. Rather, we must decide whether Willman's peer reviewers could have reasonably concluded that he provided substandard care." The Court found the record contained ample evidence supporting the peer group's conclusions, including the finding of substandard care by four well-qualified physicians who were not affiliated with the hospital and did not practice in St. Joseph and therefore did not compete with Dr. Willman. The Court concluded the findings of the peer reviewers "were not so baseless as to permit the inference of improper motive."[19]

The Court also rejected Dr. Willman's claim of improper motive because 43 of the 65 physicians who participated in the peer review proceedings allegedly were his competitors. Although these physicians participated at every stage of the proceedings, the Court found no evidence that they acted in concert to pursue an unlawful motive. One physician, who may have been biased, did not vote or participate in any deliberations concerning Dr. Willman's privileges and there was no evidence that he attempted to influence others. The final decisions were made by the governing boards and there was no evidence that any of the physicians attempted to influence them.[20]

The *Willman* decision does not address the provisions of the HCQIA, but it is instructive on the four standards that must be met to ensure immunity under the Act. The peer reviewers acted with the reasonable belief that their actions were necessary to assure quality health care. They made a reasonable effort to obtain the facts of the matter. Not much detail is provided regarding the notice and hearing procedures afforded Dr. Willman, but the record clearly shows the hospitals and their medical staffs made exhaustive efforts to work with him and to be fair. Finally, their belief that the revocation of privileges and the denial of reinstatement were warranted by the facts was a reasonable belief, in light of the findings of the physicians who reviewed the cases and Dr. Willman's response to their proposals.

The federal courts in other jurisdictions have applied the HCQIA to similar circumstances and have refused to second-guess hospitals and physicians when the peer review process was fair, the participants were concerned about quality of care and the steps they took to remedy the situation were warranted by the facts as they perceived them.[21] One of the key factors identified by the courts is the impartiality of the peer review participants. The use of physicians who are not direct competitors on the panel, "second opinions" from physicians who are not affiliated with the parties, and the abstention from participation or voting by any physician who might be viewed as biased have provided courts this assurance. Another important factor has been the steps the physicians and hospitals have taken to work with the physician toward a mutually acceptable solution and the physician's lack of cooperation with those efforts.

Continued on page 726

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Continued from page 725

Conclusion

The value of peer review in improving the quality of medical care has long been recognized by the institutions in which physicians practice. The state and federal legislatures and courts have given physicians protections and immunities necessary to promote thorough and effective peer review and at the same time allow the information from proceedings to be used to promote quality medical care and protect patients. Physicians who participate in peer review should insist on strict rules of confidentiality for their deliberations and documents and should ensure that the fair hearing procedures in their bylaws conform to the statutory guidelines. When the court becomes involved, it will look at the evidence for both sides. Extra steps to avoid any appearance of bias or improper motive may seem like overkill at the time but may pay off in the long run.[22]

References

[1] Section 537.035, RSMo. The statute provides two exceptions to the discovery limitations, proceedings brought by or against the peer review participants and legally authorized requests from health care licensing boards. *Id.*, subsections 5 and 6.

[2] One writer suggests Oklahoma is the only state that has not adopted a peer review statute. The first state legislature to adopt a peer review privilege was Illinois in 1961. Scheutzow, S. and Gills, S., *Confidentiality and Privilege of Peer Review Information: More Imagined than Real*, 7 J.L.&Health 169 (1992-93).

[3] 678 S.W.2d 804 (Mo. 1984).

[4] 678 S.W.2d 813 (Mo. 1984).

[5] *Chandra, supra,* at 806.

[6] The statute protects "the proceedings, findings, deliberations, reports, and minutes of peer review committees concerning the health care provided any patient." Section 537.035.4, RSMo.

[7] *State ex rel. Faith Hospital v. Enright*, 706 S.W.2d 852, 853 (Mo.banc 1986).

[8] *Id.*, at 855.

[9] *State ex rel. St. John's Mercy v. Hoester*, 708 S.W.2d 796 (Mo.App.E.D. 1986).

[10] *Id.*, at 798. The Court reaffirmed its disapproval of overbroad requests for information that could fall within the protection of the peer review statute in *State ex rel. St. Anthony's Medical Center v. Provaznik*, 863 S.W.2d 21 (Mo.App.E.D. 1993).

[11] 42 U.S.C. section 11101.

[12] The HCQIA contains no specific provisions regarding the confidentiality of peer review documents.

[13] 42 U.S.C. section 11112(a).

[14] 42 U.S.C. section 11112(b). The provisions are not mandatory. The hospital may be able to prove it met the requirements of the Act if notice is adequate, a hearing is held in a timely fashion and in accordance with its bylaws, the physician was afforded the rights of representation, cross-examination and confrontation, and a record of the proceedings was made. *Smith v. Ricks*, 31 F.3d 1478 (9th Cir. 1994).

[15] 34 F.3d 605 (8th Cir. 1994).

[16] 42 U.S.C. section 11111(c).

[17] 836 F.Supp. 1522 (W.D.Mo. 1993).

[18] *Willman, supra.*

[19] *Id.*, at 611.

[20] *Id.*, at 612. Dr. Willman claimed to practice in the specialties of general surgery, urology, gynecology, gastroenterology, and internal medicine. Id., at 612 n.4.

[21] *See Bryan v. Holmes Regional Medical Center*, 33 F.3d 1318 (11th Cir. 1994); *Smith v. Ricks*, 31 F.3d 1478 (9th Cir. 1994); *Austin v. McNamara*, 979 F.2d 728 (9th Cir. 1992); *Fobbs v. Holy Cross Health System Corp.*, 789 F.Supp. 1054 (E.D.Ca. 1992); *Quartemont v. St. Joseph Hospital*, No. H-94-1787 (S.D.Tex.Aug.14, 1995); *Mathews v. Lancaster General Hospital*, No. 93-6774 (E.D.Pa.May 4, 1995); *Rooney v. Medical Center Hospital of Chillicothe*, Case No. C2~92-1100 (S.D.Ohio 1995).

[22] The HCQIA provides for the award of attorneys' fees and costs to the defendants if they prevail and the Court determines the lawsuit was frivolous. 42 U.S.C. section 11113; *see, Smith, Rooney, supra note 20.*

The Author

Jo Anne Morrow, RN, JD, is the Director of Quality Care Management and a member of the senior administrative staff at Phelps County Regional Medical Center, Rolla, Missouri. She supervises the activities of the Medical Staff Office. She formerly worked for the State of Missouri and for Glynn & Harvey, a medical malpractice defense firm in San Francisco, California.

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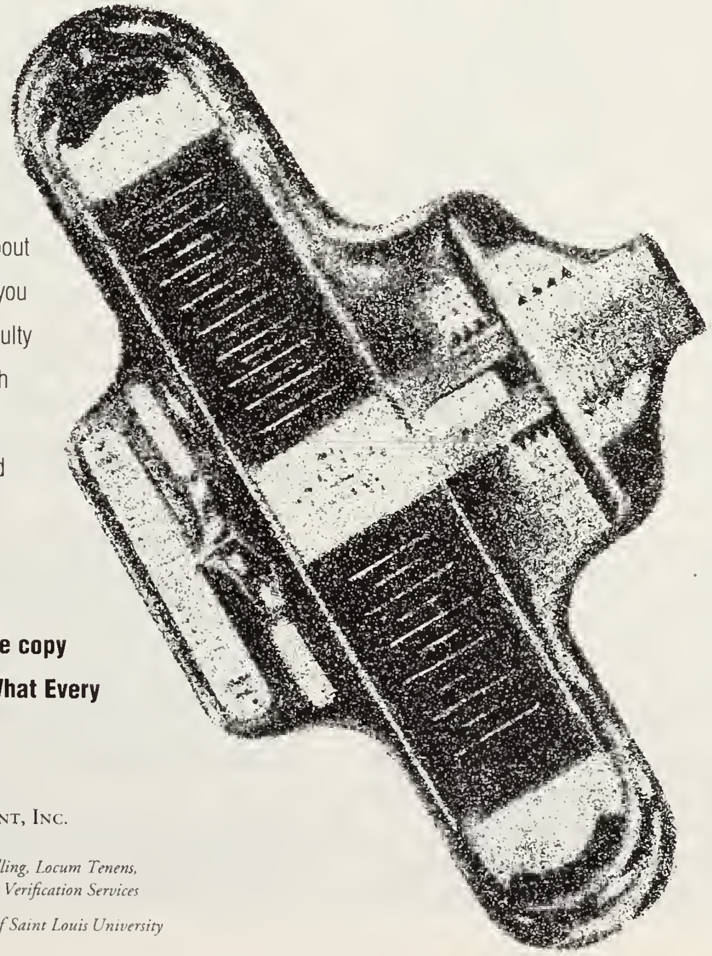

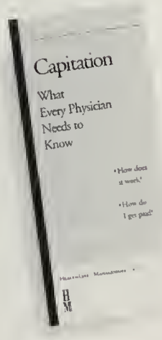

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Membership Notes

James G. Blythe, MD, FACS, FACOG, presently Interim Chair of the department of obstetrics and gynecology at St. John's Mercy Medical Center, St. Louis, was formally inducted as President of the Central Association of Obstetricians and Gynecologists (CAOG). Dr. Blythe and his wife, Elizabeth, recently returned from Ghana, West Africa, where he is training Ghanaian medical students and residents toward improving that country's women's health care. It was their third month-long medical mission to Ghana and is being supported under a Carnegie Foundation Grant.

I. Jerome Flance, MD, and his wife **Rosemary Flance**, have been recognized with an endowed Professorship of Pulmonary at Washington University School of Medicine. The professorship will support research in the Division of Pulmonary and Critical Care Medicine and is funded largely by a gift from the estate of the late Sam J. Golman, a St. Louis-area businessman. Dr. Flance is a clinical professor of medicine at Washington University and has been a member of the clinical faculty for 53 years. He instituted the Home Care program at The Jewish Hospital of St. Louis in 1953 and served as its director for 11 years. The program provides home visits from health care professionals for patients who need extra care or follow-up after leaving the hospital. It was the first service of its kind west of the Mississippi. The School of Medicine established the Flance Visiting Professorship in 1976 to honor Dr. Flance's outstanding contributions to teaching. He was honored again for teaching in 1981 with the Department of Medicine Teacher of the Year Award. He received the Distinguished Alumni Award in conjunction with Founder's Day in 1986 and was given the Alumni/Faculty Award from the Washington University Medical Center Alumni Association in 1990. In 1992, the School of Medicine named a Distinguished Alumni Scholarship in his honor; the scholarship awards full-tuition scholarships to medical students each year on the basis of academic merit. He received the School of Medicine's 2nd Century Award in 1994 in recognition of his contributions to the medical community. Dr. Flance is a member of the School of Medicine's National Council. Rosemary Flance is a former president of the women's division of the St. Louis Jewish Federation and has been a board member of the Washington University Women's Society of the St. Louis Symphony Society Volunteer Association. She is an active supporter of numerous other community agencies as well.

George M. Bohigian, MD, presented lectures on "Management of Endophthalmitis" and "Corneal Ulcers" at the Second Armenian/American Eye Conference at the Republic Eye Hospital in Yerevan, Armenia in September. The lectures were part of a Medical Mission Eye Project through the Armenian/American Medical Society. The week-long mission incorporated surgery, consultation, and teaching to the newly independent Republic of Armenia.

Richard A. Heimburger, MD, FACS, of Osage Beach, recently received a three-year appointment as Cancer Liaison Physician for the Hospital Cancer Program at Lake of the Ozarks General Hospital. The Cancer Liaison Program is an integral part of the Comission on Cancer of the American College of Surgeons. Dr. Heimburger is among a national network of more than 2,000 volunteer Cancer Liaison Physicians who provide leadership and support to the Approvals Program, and other Commission on Cancer activities.

Michael W. Vannier, MD, professor of radiology, received a four-year grant from the National Institute of Child Health and Human Development for a research project titled "Prosthetics Fitting System."

Victoria Fraser, MD, assistant professor of medicine, received a four-year grant from the Department of Health and Human Services for a research project titled, "Implementation of Strategies for the Prevention of Occupational Transmissions of Blood-Borne and related Pathogens."

*MSMA members' honors and achievements including election or appointments to national or state offices, awards, academic appointments and grants may be sent to **Missouri Medicine**, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.*

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Theresa M. Patton
Christina M. Urena
Amy E. Waitman
Jason Wright

Membership Notes, Continued from page 727

IN MEMORIAM

Robert Adams, MD, 58, Joplin, Missouri, died November 7, 1995. Dr. Adams received his medical degree at the University of Arkansas, Little Rock, in 1963. He was a retired physician and a member of the medical staff at St. John's Regional Medical Center from 1967 until 1985. Dr. Adams was vice president of the medical staff in 1978 and president in 1979. He was chair of the department of medicine in 1976. Dr. Adams was instrumental in opening a diaylsis unit for Joplin residents in 1978. He was medical director of the Community Clinic in 1994. Dr. Adams served on several committees at St. John's.

Robert Burns, MD, 72, Sonoma, California, died November 8, 1995. Dr. Burns received his medical degree at the University of Oregon in 1947. He had joined the Army during World War II and entered the wartime accelerated medical program. After an internship at the University of Oregon, he practiced general medicine in the seaside logging town of Waldport. His interest in the surgical repair of loggers' crushed fingers led him to pursue an eye surgical specialty after serving as a flight surgeon during the Korean War. He had residency training in ophthalmology at Columbia University in New York and was appointed to the faculty there. He returned to Oregon in 1957 and taught at the University of Oregon Medical School for more than 20 years. He served as professor and chair of the department of ophthalmology at the University of Missouri from 1979 until his retirement in 1991. Dr. Burns was an examiner for the American Board of Ophthalmology for more than a decade and served a term as president. He was elected to several professional and research societies including the American Opthalmological Society. Dr. Burns published more than 80 research articles on diseases of the eye.

Clyde R. Milster, MD, 81, St. Louis, Missouri, died October 24, 1995. Dr. Milster received his medical degree at Washington University in 1938. He served as a medical unit commander in the Army in the South Pacific during World War II. Dr. Milster was in private practice for more than 40 years before he retired in 1980. He was formerly on staff at Deaconess Hospital, Cardinal Glennon Children's Hospital, and what is now St. Mary's Health Center in Richmond Heights. Dr. Milster was also a former associate clinical professor and served in the department of ophthalmology at St. Louis University. He was an advisor to the St. Louis Association of Occupational Health Nurses Inc. and a fellow of the American College of Surgeons. He was a coauthor of a handbook on visual efficiency ratings for eye injuries. Dr. Milster was also a member of the American Academy of Ophthalmology and Otolaryngology.

John L. Mothershead, MD, 81, St. Joseph, Missouri, died October 17, 1995. Dr. Mothershead received his medical degree at St. Louis University in 1936. He served an internship at St. Joseph's Hospital and received surgical training at Cook County Hospital, Chicago. Further medical training included study in tropical diseases at Washington, D.C., and in communicable diseases at Fitzsimmons Army Hospital in Denver. He began practicing in Denton, Kansas in 1938 and continued until 1941. He returned to Denton to practice from 1945 to 1950. Dr. Mothershead served in the Army Medical Corps during World War II and the Korean War. As a major, he commanded the 8076th Mobile Army Surgical Hospital. He was appointed as inspector general in 1953. He earned a promotion to lieutenant colonel and a Bronze Star for his service in Korea. He had a private practice in St. Joseph from 1954 until retiring in 1990. Dr. Mothershead served as a former St. Joseph's Hospital's chief of staff and chief of surgery. He also served on its board of directors for 14 years. He was a volunteer physician for local high school football games and for physical examinations for athletes. Dr. Mothershead was past president of the Buchanan County Medical Society, and a member of the Missouri State and American Medical Associations, the American Academy of General Practice, and American Academy of Family Practice.

Otolaryngology Quiz #10

by Scott Estrem, MD
Division of Otolaryngology, University of Missouri - Columbia

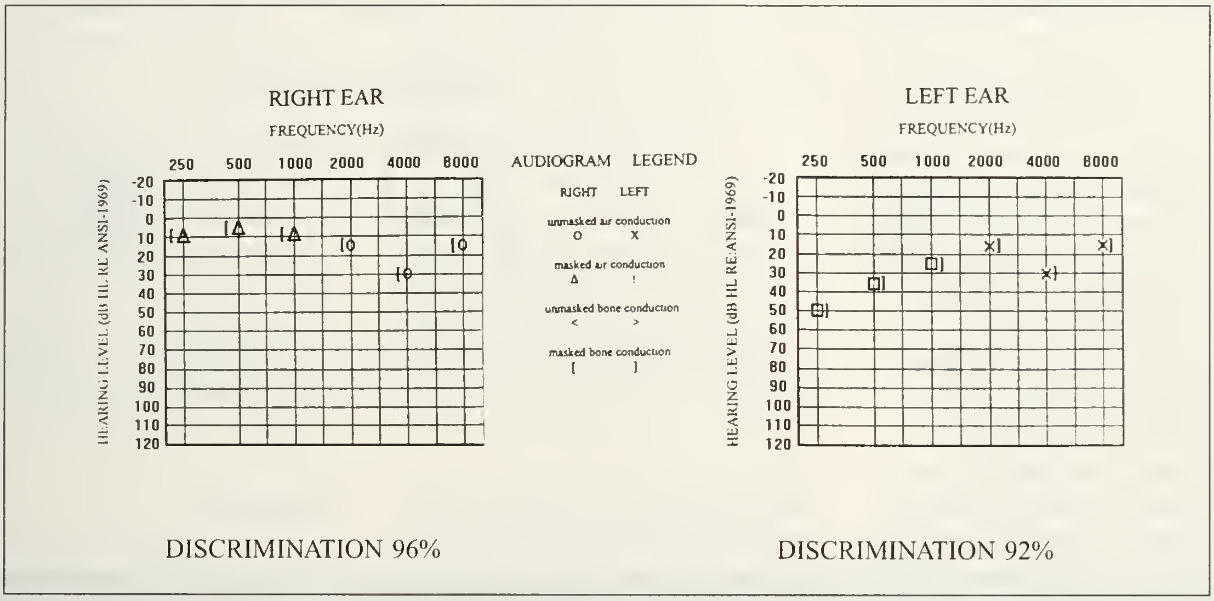

Figure 1

MG is a 43-year-old white woman with a six month history of episodes consisting of decreased hearing in the left ear with roaring tinnitus AS and spinning vertigo occasionally associated with nausea and vomiting. She also notes a pressure feeling on the same side during these spells which last approximately one to three hours. After the spells, her hearing improves but over time has diminished when compared with the opposite ear. She is seen in your clinic with the above audiogram.

The diagnosis in this patient is most likely:

a. perilymphatic fistula
b. autoimmune inner ear disease
c. otosclerosis
d. Meniere's disease
e. cerebrovascular disease with labyrinthine artery involvement
f. viral labyrinthitis

(See answer on next page.)

The Otolaryngology Quiz is produced by the Division of Otolaryngology of the University of Missouri-Columbia.

Otolaryngology Quiz Answer

Otolaryngology Quiz question is on previous page.

ANSWER: d. Meniere's Disease

The case report describes a classic case of Meniere's disease which begins with discrete spells of vertigo, unilateral hearing loss and roaring tinnitus, and a full pressure feeling on the ipsilateral ear. Each spell typically lasts from ten minutes to 24 hours with dysequilibrium lasting for hours following the actual spell. The vertigo may vary with mild and severe spells manifesting in any given patient. Nausea, vomiting, and diaphoresis represent constitutional symptoms which accompany the severe spells of vertigo.

In Meniere's disease, either overproduction or under resorption of endolymph occurs causing a build up of pressure and increased volume in the endolymphatic compartment (Fig 2). This may result in rupture of the inner ear membrane separating the perilymphatic and endolymphatic compartments. The high potassium endolymph which bathes the receptor cells for hearing and balance is disturbed by the inrushing perilymph with its low potassium concentration. This results in impairment of neural transmission accounting for the episodes of decreased hearing, associated tinnitus, and vertigo.

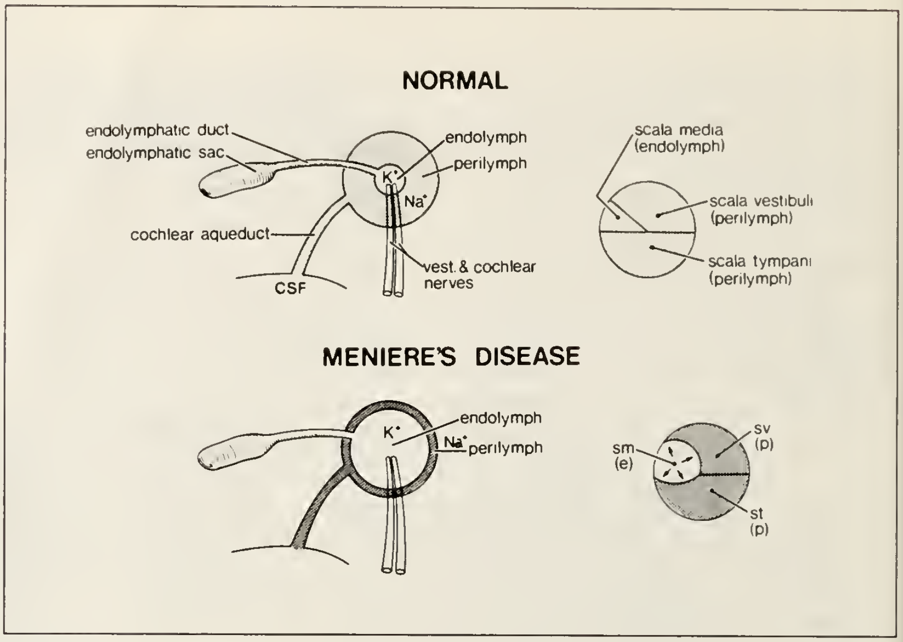

Figure 2

The hearing loss is a low frequency sensorineural type which returns to normal following the spell during the early stages of the disease. The audiogram depicted in the case demonstrates such a loss with identical air and bone conduction thresholds indicating the absence of an air-bone gap, or conductive hearing component.

Two types of sensorineural hearing loss patterns are present. A notch at 4 kHz noted with each ear indicates a loss consistent with noise exposure. The low frequency sensorineural hearing loss noted in the left ear is commonly seen with Meniere's disease, but is not pathognomonic. This type of loss can be seen in perilymph fistula, acoustic neuroma, otosyphillis, or even autoimmune inner ear disease.

Initially, speech discrimination (word recognition) is preserved; however, the hearing loss may become permanent with slow deterioration of the hearing thresholds including speech discrimination.

Management

The mainstay of treatment is dietary restriction of salt and caffeine with the utilization of diuretics. Most people respond to medical management with stabilization of hearing and elimination of the vestibular crises. Some patients may require surgical management including endolymphatic shunt operation, vestibular nerve section, or labyrinthectomy. With these medical and surgical options available, the prognosis for elimination of the dizziness is excellent.

Differential Diagnosis

The differential diagnosis for this patient would include a perilymphatic fistula which means a pathologic leakage of perilymph from the inner ear into the middle ear or mastoid. This may occur with trauma to the ear, barotrauma, or following stapes surgery. Spontaneous fistulas are also described but remain controversial. The presentation of perilymph fistula may mimic the signs and symptoms of Meniere's disease. A clue to its diagnosis may be an atypical presentation or failure of standard medical treatment.

Otosclerosis usually involves stapes fixation with a conductive hearing loss. However, sensorineural hearing loss and intermittent spells of vertigo may also be a part of this disease with inner ear involvement. It can be differentiated from Meniere's disease as the hearing loss does not fluctuate.

Autoimmune inner ear disease may involve one or both ears. Sensorineural hearing loss and dizziness may be included in the variable symptom presentation. Fluctuating hearing is possible in this condition. The diagnosis is made by clinical suspicion, positive autoimmune studies, and at times, response to steroid therapy.

Cerebrovascular disease with occlusion of the vessels which feed the cochlea and vestibular systems results in permanent sensorineural hearing loss and vertigo. The vertigo usually resolves during the course of several days.

Viral labyrinthitis often follows a viral illness and presents with acute onset of vertigo, nausea and vomiting without associated hearing loss. The vertigo may have a duration of two to three days with resolution of ensuing dysequilibrium over the period of a week.

Reference

1. Estrem SA, Davis WE. Meniere's Disease: Recent Advances. *Missouri Medicine* 1988;85(3).

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Physician Directed Networks: The Renaissance Perspective

Tom Bennett, MDiv, MSW, MBA, GCG, Mike Wood, MS, MBA
and Tom Allen, MD, President of Renaissance Healthcare Partners

"These are hard times in which a genius would wish to live. Great necessities call forth great leaders."
Abigail Adams, 1790, in a letter to Thomas Jefferson.

Physician Directed Networks (PDNs) appeared to get a shot in the arm in early October of this year through the AMA-GOP House plan to curtail Medicare spending. As a reward for the AMA endorsement of the GOP House plan for Medicare spending reductions, the GOP was prepared to exempt Provider Service Networks (PSNs) from state regulations, including capital requirements. However, the euphoria was short lived, due to the intense lobbying efforts of the powerful insurance industry, state regulators and the Governors' Association. These lobbyists convinced the GOP leadership to set up a patchwork of state and federal regulations, thereby effectively making it difficult for PDNs to penetrate the market.

The most significant action that has the potential to radically reform the delivery of healthcare came, not out of Washington, but rather out of the bastion of managed care, namely, Minneapolis. The announcement by the Business Health Care Action Group (BHCAG) that a major strategic decision had been made by the 24-member purchasing group to totally circumvent managed care organizations and **contract directly with providers**. According to Steve Wetzell, Executive Director of BHCAG, the managed care organizations are not adding value to healthcare services.[1] Wetzell and his group are advocating a consumer (patient) choice model that will create a more competitive environment for providers.

What is significant about the BHCAG decision to bypass managed care firms is that this purchasing group has seen its healthcare premium rise only 3.6% under managed care plans as compared to the national average of 7%. This group's covered lives make up 10% of the market, which has an 80% managed care penetration rate.

This announcement by BHCAG sent shock waves through the insurance industry. At a June meeting in St. Louis of the National Association of Insurance Commissioners, the Group Health Association of America, which is the major lobbying arm of managed care organizations, called for stronger regulations of providers that accept direct contracts with employers. These insurance associations maintain that provider networks do not have the capital nor the infrastructure to compete efficiently. Already the insurance industry has thrown down the gauntlet. It is clear that it is prepared to make it difficult for PDNs to enter the market for fear that organized physicians will regain control of healthcare delivery from managed care organizations.

Current Economic Dynamics

The epic struggle for control of the delivery of healthcare continues with a vengeance. The significant dynamics that are causing movement in the marketplace include:

- The demands of purchasers for **value** for their healthcare dollars; collective purchasing power of firms through purchasing groups and coalitions;
- The shifting of capital away from hospital systems and Managed Care Organizations (MCOs) into physician driven delivery systems, IPAs, Group Practices, outpatient facilities;
- The rapid movement away from hospital centered healthcare delivery to community-based care; the over capacity of hospital beds;
- Stagnation of HMOs; their future is threatened despite huge re-

serves, reduced earnings and decreased stock prices;
- The strategic partnerships of physician providers, ancillary providers and vendors;
- The entry into the marketplace of major investors/vendors who are attempting to capture the Health Information Technology market. Expenditures on Health Information Technology is projected to be $20 billion over the next 5 years.[2] The following corporations are active in this market: ATT, Southwestern Bell, Marion Merrell Dow, IBM, Kodak, Eli Lilly and Cerner.[2]

In order to better understand the rise of Physician Directed Networks, it is imperative to understand the local/national political and economic climate.

History and Background of RHP

Renaissance Healthcare Partners (RHP) is aptly named because it signifies the "rebirth" of the physician as the patient care manager and the patient advocate.

RHP is a true partnership of physician providers, ancillary providers, insurance professionals and business professionals. What has evolved from this partnership, and for very little capital, is a "virtual" full-service healthcare delivery system, and a "virtual" insurance system, with physicians in control of all aspects of the system.

RHP arose out of the deep frustration felt by a growing new breed of young physicians. This frustration was fueled by the continued encroachment by insurance companies and managed care organizations of the control over patient care management. This frustration was further aggravated by the deselection tactics of these same insurance companies and managed care organizations. Further compounding this situation is the continued policy of hospital systems that purchase physicians' practices in order to control the patient referrals and associated revenues.

From kitchens, living rooms and church basements, a grass roots movements was begun by a group of young, determined and dedicated Kansas City physicians. Their mission is to place patients as the focal point of healthcare delivery, regain control over patient care management, and to continue to be advocates for their patients.

Despite the many obstacles, the trials and tribulations, the joys and woes, the untold hours spent away from family, and the toll on their clinical practices, this dedicated and committed band of physicians stayed the course. They are now about to witness the rebirth of physician directed healthcare throughout the Metropolitan Kansas City area when RHP becomes fully operational in early 1996.

"Renaissance Healthcare Partners (RHP) is a patient-focused, physician-directed health care delivery system. The goal of Renaissance is to improve the quality, access, availability, efficiency and effectiveness of patient care through an integrated network of providers that contracts directly with employers." (RHP Mission Statement)

RHP has come a long way over the past 12 months. A great amount has been accomplished by the board of directors and the management team:

- 800 physicians have signed provider agreements;
- 300 physicians are shareholders;
- The credentialling of physicians per NCQA standards is in process;
- Escrow has been broken;
- A loan agreement with Olsten/Kimberly QualityCare has been signed;
- Hospital contracting is taking place;
- Negotiations with CoreSource (TPA) for claims management and information management are being finalized;
- Negotiations with Community Health Partners to establish the insurance infrastructure is also being finalized;
- Negotiations are in process for the "Network Management" of homecare, pharmacy, lab, and behavioral medicine;
- Bids are being sought for lab, pharmacy, imaging/radiology, outpatient surgery, home care, rehab;
- A physician advisory board and business liaison committee have been formed.

At a recent RHP "Town Hall" meeting, the concept of RHP was strongly endorsed by local business executives and the director of the Kansas City business coalition on health.

Legal Structure

RHP has been structured as a "C" corporation and licensed to conduct business in both Missouri and Kansas. The "C" corporation was chosen over a Limited Liability Company (LLC) because of its investment flexibility characteristics and future capitalization potential.

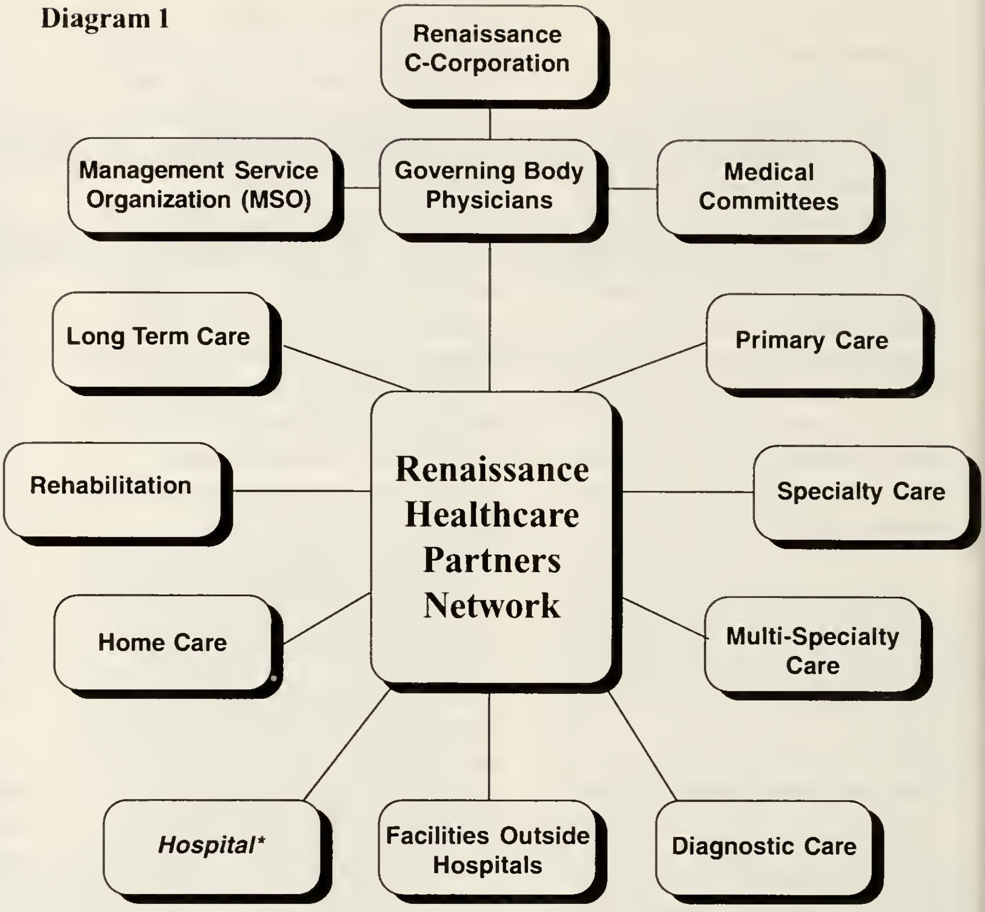
Ownership

RHP is structured so that the ownership and control of the organization would lie solely in the hands of physicians, and to prevent the organization from being maneuvered away from their control. This a unique aspect of this organization, and the board of directors have resisted overtures from non-physi-

Continued on page 736

Continued from page 735

Diagram 1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cian investors who wish to invest in RHP for a certain amount of control and voting rights. The ownership plan is designed and structured so that only individual physicians may purchase either class A or B stock (voting stock).

Only physicians can hold voting stock: class A is for primary care and class B for specialty care. Physicians are only eligible for one vote. Other shares of class "C" (non-voting) stock may be purchased. In March of 1996 non-physicians may purchase class "D" (non-voting) stock.

Capital

Besides the capital raised by the sale of stock to physicians, and the loan negotiated with Olsten/Kimberly QualityCare, more operating and development capital is expected to be raised in March 1996 through the sale of class "D" stock. At the same time there will be a second offering of class "A," "B" and "C" stock for physicians.

In order to support its ongoing operations and continued development, RHP will incorporate an administrative fee which will also be incorporated into RHP's re-insurance product offering.

Governance

RHP is governed by a board of directors whose role is to approve policy and set the overall direction of the organization. The board is assisted, through a committee structure that comprises:

- An Executive Committee;
- Finance Committee;
- Credentialling Committee;
- Utilization Management Committee;
- Quality Improvement Committee
- Business Liaison Committee
- Operations Committee;
- Strategic Development Committee;
- Communications/Public Relations Committee;
- Management Service Organization (MSO) Committee.

Management and Operations

RHP presently has an Acting Executive Director, and Associate Director and support staff. Since RHP is a Physician Directed Organization, it is only fitting that a qualified, experienced physician executive will be recruited to fill the role as the full-time Executive Director. This would set RHP apart from other organizations in that it is not only physician owned and governed, but it is truly physician-directed and managed by a full-time physician executive.

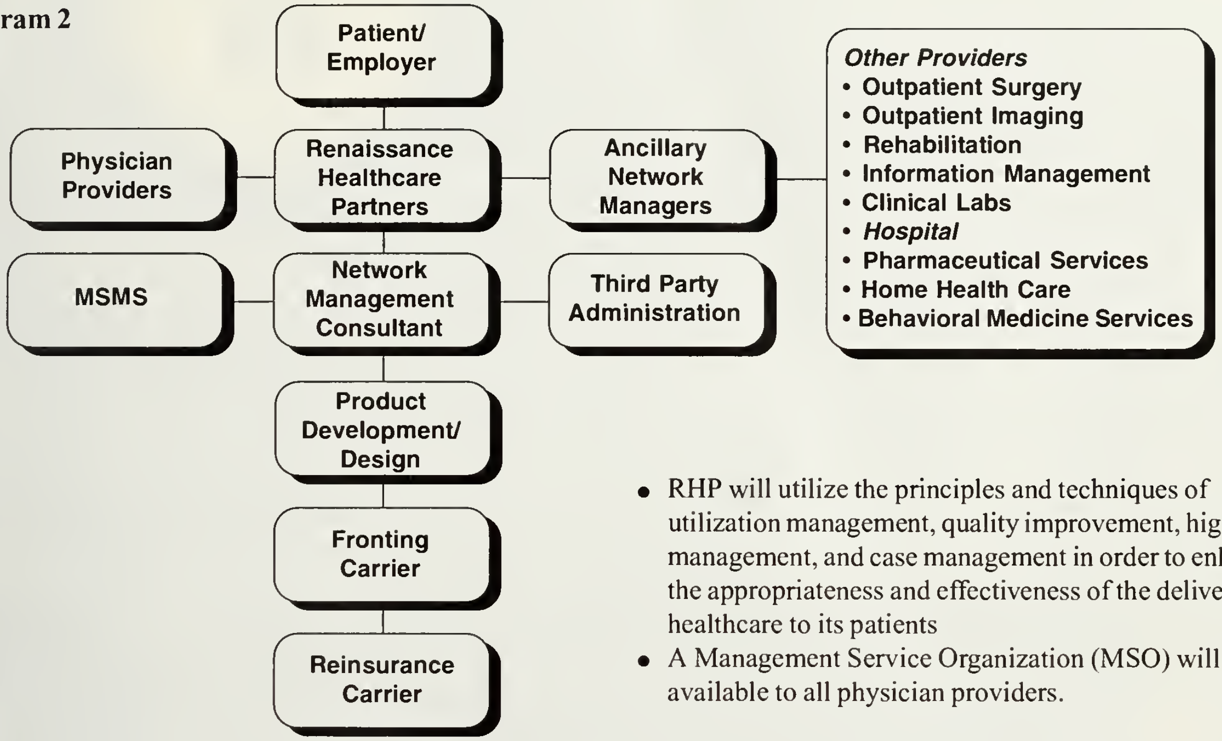
Future Development of RHP

The advantage of using a "franchise-type" model for RHP is that it greatly collapses the time factor, and greatly reduces the cost and effort to establish a Physician Directed Network.

Like politics, all healthcare is "local" and the RHP network must have local physician leadership, allow for local autonomy and control, meet the local healthcare needs, and develop its own culture.

Once these RHP "franchise" networks have been developed and are fully operational, then they can be easily linked to form a regional, and eventually a statewide RHP network.

Diagram 2


Patient/ Employer
Physician Providers
Renaissance Healthcare Partners
Ancillary Network Managers
Other Providers
• Outpatient Surgery
• Outpatient Imaging
• Rehabilitation
• Information Management
• Clinical Labs
• Hospital
• Pharmaceutical Services
• Home Health Care
• Behavioral Medicine Services
MSMS
Network Management Consultant
Third Party Administration
Product Development/ Design
Fronting Carrier
Reinsurance Carrier

Clinical Model (please refer to diagram #1)

RHP will provide a full range of services in a coordinated manner under the auspices of a physician owned and directed organization, and through a partnership of ancillary providers.

Some of characteristics of the model include:

- It is a community based model rather a hospital centered model with as much care being provided in less costly office/outpatient setting;
- Patient care management decisions will be physician controlled;
- Providers will be conveniently located throughout the greater Metro Kansas City area;
- All related home care will be managed by a home care network management group;
- All pharmacy services will be managed by a pharmacy network management group;
- All lab services will be managed by lab network management group;
- All behavioral medicine services will be managed by a network management group;
- The use of physician owned Alternate Delivery Sites (ADS) will be fostered;
- Hospital days/services will be contracted through area hospitals;
- RHP will utilize the principles and techniques of utilization management, quality improvement, high risk management, and case management in order to enhance the appropriateness and effectiveness of the delivery of healthcare to its patients
- A Management Service Organization (MSO) will be available to all physician providers.

The Plan Infrastructure (please refer to diagram #2)

What sets RHP apart from other networks is that RHP physicians, besides being in control over patient care management decisions, will have control over the insurance, health plan and claims management infrastructure of RHP. This has been accomplished through a negotiated relationship between two key partners, namely CoreSource (TPA) and Community Health Partners which is a consortium of business and insurance professional that bring their technical and business expertise to provider driven organizations.

The responsibilities of Community Health Partners include:

- Plan design/Product Development;
- Employer underwriting;
- Fronting carrier coordination;
- Actuarial support and analysis;
- Regulatory compliance/state filings;
- Reinsurance;
- Broker/agent marketing;
- Facilitate prospecting/quoting process;
- Small group compliance (prospective/retrospective);
- Employer/Employee contracts/directories/certificates;
- ERISA summary plan descriptions;
- Commissions processing;
- Provider other benefits: group life, disability and dental.

Continued on page 738

Continued from page 737

CoreSource is the second largest Third Party Administrator (TPA) in the USA. It has a Kansas City office and is a major partner in RHP.

CoreSource will be responsible for:

- Claims management, adjudication and processing;
- Complex benefit plan administration;
- Utilize review and case management;
- Access to national PPOs;
- Detailed cost and clinical data capture;
- Medical claims analysis by procedure, diagnosis and continuum of care;
- Plan cost and utilization evaluation;
- Provider profiling;
- Access to CoreSource Edge;
- COBRA administration.

Products/Services

The initial product that will be offered by RHP is a PPO/EPO product line that will be primarily targeted toward small companies of between 2 and 150 employees. These product lines will also be marketed to larger companies.

Rather than employ marketing personnel, RHP will enter into a strategic collaboration with the local brokers/agents to market and sell these product lines. RHP wants to take advantage of the wealth of knowledge and information of this local, vital resource. The brokers/agents have long standing relationships with local companies both large and small and are keenly aware of the wants, needs, demands and expectations of buyers of benefits. These brokers and agents will be key members of the RHP.

The Market

The primary target will be companies that are either fully or partially insured. RHP will contract directly with these companies.

Of the 1.7 million people that live in Metropolitan Kansas City, 850,000 are employed and 70% of these employees work for companies of less than 200 employees.

The other segments of the market to be targeted include:

- Self-funded companies;
- RHP Network physicians, their staffs and dependents;
- RHP Network ancillary providers, their staffs and dependents;
- The Medicare population.

In Kansas City, the largest employer is the Federal Government with 30,421 employees, and the number drops dramatically to companies of less than 9,000. There are just 9 companies in Kansas City that have over 5,000 employees; 10 companies that have between 3,000 and 4,999 and 17 companies that have between 1,500 and 2,999 employees.[3]

Competition

The major competitors for RHP include Principal, HealthNet, PHP and Blue Cross and Blue Shield plans. These organizations have well established provider networks, in addition to well organized operational and insurance infrastructures. They also have large financial resources. However, despite their strengths and their market penetration, they all have their Achilles heel, i.e., they are not providers; they do not have a physician-patient relationship with insureds. De facto, they are faceless intermediaries who presently control patient care management.

Summary

It is time for all providers, physicians, hospital executives and ancillary providers to find creative ways to meet the healthcare needs of their local communities. More efficient systems of health care delivery will come from noncompetitive partnerships based on shared visions, collaborations, openess, honesty and integrity.[4]

RHP can be a catalyst for physicians and other providers in the Kansas City area and throughout the state to respond to the challenges and opportunities that lie before them.

For more information about Renaissance, please call Kelly Carter at (816)531-3002.

References

1. *Modern Healthcare*, July 3, 1995, p. 29.
2. Hester PC, Harris GE. *Practice Management and Health Care Information Technology Conference*, Smith-Barney, NY, September 1995.
3. Greater Kansas City Chamber of Commerce.
4. Adams DC, *Hospitals*, Nov. 5, 1995.

Recommended Reading:

Warren Bennis. *Leaders: Strategies for Taking Charge.* NY, Harper and Rowe, 1985.

Missouri State Medical Association

138th Annual Convention

MSMA

Preliminary Program

April 11 - 14, 1996

Permission granted by the Missouri Division of Tourism

Tan-Tar-A Resort → Osage Beach, MO

Annual Meetings & Events

Thursday, April 11

10:00 a.m.	Opening Session, MSMA House of Delegates
11:45 a.m.	St. Louis Metropolitan Medical Society Luncheon and Caucus
12:00 noon	Metropolitan Medical Society of Greater Kansas City Luncheon
6:00 p.m.	Reception Honoring MSMA and MSMAA President

Friday, April 12

7:00 a.m.	Councilor Breakfasts Districts 1, 2, 5, 6, 8, 10
8:30 a.m.	MU Alumni Organization Board of Governor's Breakfast Meeting
9:00 a.m.	MSMA General Session
10:30 a.m.	Resident Physicians' Section Meeting
10:30 a.m.	Young Physicians' Section Meeting
11:00 a.m.	Discuss the Issues with your AMA Delegates
12:00 noon	Councilor Districts 7 and 9 Luncheons
12:00 noon	Student Delegates' Luncheon
12:30 p.m.	MU Alumni Awards Luncheon
2:00 p.m.	St. Louis Metropolitan Medical Society Caucus
2:00 p.m.	Hospital Medical Staff Section Meeting
4:00 p.m.	Second Session, MSMA House of Delegates
6:00 p.m.	Receptions for UMC, UMKC, St. Louis University and Washington University

Saturday, April 13

1:30 p.m.	MMPAC Meeting
2:00 p.m.	MSMA General Session "Community Based - Physician Directed Medical Model of Care"
6:00 p.m.	Presidential Inauguration
7:00 p.m.	MSMA Reception

Sunday, April 14

7:30 a.m.	Final Session, MSMA House of Delegates

AMA Guest Speaker

Nancy W. Dickey, M.D.
Richmond, Texas

Dr. Dickey, a family physician from Richmond, Texas, is currently Vice-Chair of the Board of Trustees of the AMA and its Executive Committee.

She is currently Associate Professor, Family Practice and Community Medicine, University of Texas Medical School at Houston.

Dr. Dickey will address the Opening Session of the House of Delegates as well as the General Session. She will also be participating in "Discuss the Issues with your AMA Delegates."

Scientific Program

Missouri State Allergy Association
Missouri Thoracic Society

Objectives: To provide new and clinically useful information on recent advances in the diagnosis, management and treatment of asthma and allergic disorders.

Friday, April 12

6:30 p.m.	Dinner

Saturday, April 13

8:00 a.m.	"Leukotriene Antagonists - New Treatment Options for Asthma" **Harold S. Nelson, M.D.**, Senior Staff Physician, National Jewish Center for Immunology and Respiratory Medicine, Denver, CO
9:00 a.m.	Brasher Memorial Lecture "Beta-Agonist Controversy" **Irwin Ziment, M.D.**, Professor and Chief, Department of Medicine, University of California Medical Center, Los Angeles, CA "Latex Allergy" "New Inhalation Delivery System" **Mark Vandewalker, M.D.**, Medical Director of Clinical Research of the Ozarks, Rolla
12:00 noon	Business Luncheon
1:30 p.m.	Fellow Research Presentations

Missouri Society of Anesthesiologists

Objectives: After attending this session, anesthesiologists should have a greater understanding of automated record keepers and the role they play in data acquisition, quality improvement, information management and cost control. Participants will also be provided an update regarding the options available to provide anesthesia including medically-directed CRNAs and/or anesthesiologists' assistants (AA).

Anesthesiologists (continued)

Friday, April 12

6:30 p.m.	Reception
8:00 p.m.	MSA First House of Delegates

Saturday, April 13

7:00 a.m.	MSA Reference Committee
9:30 a.m.	"The Automated Record Keeper - An Idea Whose Time Has Come" **David L. Reich, M.D.**, Associate Professor of Anesthesiology, Department of Anesthesiologists, Mount Sinai School of Medicine, New York, NY "Impact of an Automated Record Keeper in an Urban Hospital" **Jay D. McNitt, M.D.**, Assistant Professor of Anesthesiology, University of Missouri, Kansas City Moderator: **James Kelly, M.D.**, Kansas City
11:30 a.m.	Luncheon and Engler Memorial Lecture "Complications in Pediatric Anesthesia" **Robert Valley, M.D.**, Associate Professor, Department of Anesthesiology, University of North Carolina Medical Center, Chapel Hill, NC Moderator: **Michael Ritter, M.D.**, St. Louis
1:00 p.m.	"Staffing Options for the Anesthesia Care Team in the Future" **Arthur M. Boudreaux, M.D.**, Professor of Anesthesiology, University of Alabama School of Medicine, Birmingham, AL Moderator: **James Kelly, M.D.**, Kansas City
4:00 p.m.	MSA Second House of Delegates

Scientific Program

American **Cancer** Society, Missouri Division
Missouri State **Surgical** Society
Missouri Chapter American College of **Surgeons**

Objectives: To increase the physicians' knowledge of new breast cancer treatment modalities with specific attention to: 1) early detection and impact on survival, 2) surgical options (overview and surgical considerations), 3) radiotherapeutic consideration and patient selection, and 4) adjuvant therapy and induction chemotherapy.

Friday, April 12

11:00 a.m. "Gastrointestinal Surgery"

1:30 p.m. Socio-Economic Issues

Moderator: **Michael Bukstein, M.D.**, Hannibal

Saturday, April 13

9:00 a.m. "Current Issues in Breast Cancer Management: A Multidisciplinary Approach"

"The Impact of Early Detection on Survival"
Steven Standiford, M.D., Assistant Professor, Ellis Fischel Cancer Center, Columbia

"Surgical Options"
Steven Standiford, M.D., Columbia

"The Role of Radiation Therapy and Patient Selection in the Management of Early and Late Stage Breast Cancer"
Carlos Perez, M.D., Director, Radiation Oncology Center, Washington University School of Medicine, St. Louis

"Adjuvant and Induction Chemotherapy"
Kevin Hubbard, D.O., Clinical Assistant Professor of Medicine, University of Health Sciences College of Osteopathic Medicine, Kansas City

Cancer, Surgical, Surgeons (continued)

Moderator: **Richard Matthews, M.D.**, Rolla

12:15 p.m. Cancer Committee Luncheon Meeting

Missouri **Dermatological** Society

Objectives: Attendees will have the opportunity to self-assess their dermatologic expertise with a projected "test" with subsequent discussion. Surgical techniques appropriate for the audience will be presented. Participants will learn how to deal with the occasional patient who complains of infestation. Finally, we will discuss a model for consultation between the nondermatologist and dermatologist and how patient care can be enhanced.

Friday, April 12

1:00 p.m. "Dermatology Self-Assessment"
Ron Swinfard, M.D., Assistant Professor of Dermatology, University of Missouri, Columbia
John DeSpain, M.D., Columbia

"Surgical Pearls"
David Gaston, M.D., Resident Physician, University of Missouri Hospital, Columbia

"Dr., There Are Bugs On My Skin"
Karen Zanol, M.D., Assistant Professor of Dermatology, University of Missouri, Columbia

"Collaborative Dermatology"
Phil Anderson, M.D., Professor of Dermatology, University of Missouri, Columbia

Steve Zweig, M.D., Associate Professor of Family Medicine, University of Missouri Health Sciences Center, Columbia

Moderator: **John DeSpain, M.D.**, Columbia

Scientific Program

Missouri Chapter American College of **Emergency Physicians**

Saturday, April 13
12:00 noon Business Luncheon Meeting

American **Heart** Association

Objectives: Following this session, participants should be able to: 1) identify problems with DNR orders in the hospital arena, 2) explain the "chain of survival" metaphor, 3) understand key elements of Critical Incident Stress Debriefing (CISD), and 4) discuss current changes and highlights in resuscitation science.

Friday, April 12
11:00 a.m. "Basic or Advanced Life Support: The Human Factor"
Mr. George Miller,
Training Development Coordinator, University of Missouri Hospital and Clinics - Columbia

Moderator: **Mr. George Miller**, Columbia

Missouri Society of **Internal Medicine**

Saturday, April 13
11:00 a.m. Board of Directors' Luncheon Meeting

American College of **International Physicians**

Objectives: After attending this session, the participant will be able to: (1) apply perfusion and ventilation scans in practice and know the significance of the results, (2) understand the clinical significance of micro-albuminuria in a diabetic and manage it in clinical practice, (3) know the current recommendations for immunization in children, (4) understand the role of helicobacter pylori in pathogenesis of peptic ulcers; know effective therapy and when to apply it,

International Physicians (continued)
(5) apply prostate specific antigen in clinical practice and to interpret the results in a meaningful way, (6) effectively risk stratify patients with chest pain syndromes and (7) to recognize unstable angina.

Saturday, April 13
8:30 a.m. "V:Q Scans; Clinical Application and Interpretation of Results"
Amolak Singh, M.D., Professor and Director, Department of Nuclear Medicine, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia

"Micro-albuminuria in a Diabetic: What Does It Mean?"
R. Khanna, M.D., Professor of Medicine, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia.
R. Saran, M.D., Fellow in Nephrology, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia

"Immunization in Children: What's New?"
Jasleen Goel, M.D., Fellow in Pediatrics, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia

Moderator: **Kul Aggarwal, M.D.,** Columbia

"Helicobacter pylori: A Diagnostic Dilemma"
A. Anees, M.D., Fellow in Gastroenterology, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia

"Prostate Specific Antigen: An Update"
Dana Weaver-Osterholtz, M.D., Associate Professor of Surgery, Division of Urology, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia

Scientific Program

International Physicians (continued)

"Chest Pain: Which Patients to Admit to CCU?"
Kul Aggarwal, M.D., Assistant Professor, Division of Cardiology, School of Medicine and University Hospitals and Clinics, University of Missouri, Columbia and Staff Cardiologist, Harry S. Truman Memorial Veterans Hospital, Columbia

Moderator: **Ramesh Khanna, M.D.**, Columbia

Missouri State **Neurological** Association

Objectives: Upon completion of this program, participants will be provided with a better understanding of: 1) the recognition and differential diagnosis of Parkinson's Disease, 2) options in early treatment, 3) medical optimization of the patient with motor fluctuations, and 4) new therapies in acute stroke.

Saturday, April 13

10:30 a.m. "Parkinson's Disease"
Mark Stacy, M.D.,
Assistant Professor of Neurology, University of Missouri - Columbia Health Sciences Center, Columbia

"New Management of Acute Stroke"
Steven Horowitz, M.D.,
Chief, Division of Neurology, University of Missouri - Columbia Health Sciences Center, Columbia

11:30 a.m. "Medicare Reform Issues"
William J. Crowley, M.D.,
Past President, Missouri State Neurological Association, Austin, TX

Moderator: **Joseph Hanaway, M.D.,** St. Louis

12:30 p.m. Business Meeting

Missouri **Ophthalmological** Society, Inc.

Glaucoma Screening and Education Program

Missouri State **Orthopaedic** Association

Friday, April 12
6:30 p.m. Reception

Saturday, April 13
7:00 a.m. Breakfast Business Meeting

Missouri Society of **Otolaryngologists**

Objectives: Through continuing medical education, provide association members with the latest information in the socio-economic aspects of otolaryngology, along with the most recent advances in head and neck surgery. Specifically, to provide convention participants with an update in the areas of managed care organizations, Medicare and insurance.

Saturday, April 13
8:00 a.m. Breakfast Business Meeting

9:00 a.m. "Medical Legislative Update"
Mr. Tom Holloway, Director of Government Affairs, MSMA Staff, Jefferson City

"Update on Regulations for Medicare"
Frank Mohs, M.D., Medical Director, General American Medicare Part B, St. Louis

"Update on Head and Neck Cancer"
Jack Gluckman, M.D., Chairman, Department of Otolaryngology - Head and Neck Surgery, University of Cincinnati, OH

Moderator: **Gregory Renner, M.D.,** Columbia

11:00 a.m. Luncheon

Otolaryngologists (continued)

11:30 a.m. "Update on Organ Preservation with Chemotherapy and Radiation Therapy"
Jack Gluckman, M.D., Cincinnati, OH

12:30 p.m. Mini-course in Facial Plating

Missouri Society of **Pathologists**

Saturday, April 13
8:30 a.m. Continental Breakfast

9:00 a.m "New Perspectives of Autologous Transfusion"
James C. Healy, M.D., Assistant Professor of Pathology, Creighton University School of Medicine, Omaha, NE

"Surfing the Internet with Rudy Virchow"
James C. Healy, M.D., Omaha, NE

"Flow Cytometry in Hematopathology"
William Caldwell, M.D., Department of Pathology, Ellis Fischel Cancer Center, Columbia

"Updates in Molecular Pathology"
William Caldwell, M.D., Columbia

12:00 noon Business Luncheon Meeting (College of American Pathologists update by Washington, D.C. Field Officer)

Central Society of **Physical Medicine & Rehabilitation**

Objectives: A brief review of the pathophysiology of spasticity following traumatic brain injury is described. Clinical features and classification of spasticity are discussed. Management of spasticity is multifaceted, best described by the "stepped care" approach: prolonged stretching, positioning, serial/inhibitory casting and prevention of nociception make up the foundation. Subsequent levels of management include oral medications such as baclofen, dantrolene and diazepam. Motor point blocks and peripheral nerve blocks using phenol and intramuscular injections with botulinum toxin follow on the next step. Finally, surgical interventions such as tenotomy and rhizotomy complete the final step. The clinical literature regarding the use of botulinum toxin in spasticity is reviewed as well as the rationale for its use in head injury. Recommendations for timeliness, technique and appropriate use in clinical practice are made.

Saturday, April 13
8:00 a.m. Breakfast

"The Use of Botulinum Toxin in the Management of Spasticity Following Traumatic Brain Injury"
Martin "Casey" Childers, D.O., Department of Physical Medicine and Rehabilitation, Health Sciences Center, University of Missouri, Columbia

Objectives: A model of Muscular Dystrophy which parallels Human Duchenne Muscular Dystrophy has been discovered and researched over the past several years. The anatomy, pathophysiology and implications for human treatment and rehabilitation will be reviewed.

"Muscular Dystrophy in Dogs, Lessons for Human Rehabilitation"
Joseph Kornegay, D.V.M., Chair, Veterinarian Medicine, University of Missouri, Columbia

Objectives: Interesting and unusual electromyographic cases will be presented and discussed by the panel. Attendees will be invited to ask questions and participate in the case discussions.

"EMG Case Studies"
Panel of Distinguished Electromyographers

Objectives: Presentations of various research projects are given by the residents with judging by the group on overall quality of the work.

Scientific Program

Physical Medicine & Rehabilitation (continued)

12:00 noon	Luncheon Business Meeting
1:00 p.m.	"Resident Presentations"

Missouri Association of **Plastic and Reconstructive** Surgeons

Objectives: Provide participants with the latest techniques in skin resurfacing, utilizing endoscopic surgery in plastic surgery, cosmetic and reconstructive applications.

Friday, April 12

12:00 noon	Luncheon
2:30 p.m.	"Co$_2$ Laser Resurfacing of the Skin"

Saturday, April 13

7:00 a.m.	Board of Directors' Breakfast Meeting
8:00 a.m.	"Endoscopic Assessed Plastic Surgery"
11:00 a.m.	Business Meeting

Missouri **Psychiatric** Association
Missouri State Medical Association's **Physicians Health** Program

Objectives: Upon completion of this program, participants will be provided with a better understanding of: 1) the special needs of the medical family in a time of significant change, 2) the impact of various types of impairments, 3) research findings regarding the medical family, and 4) the resources and opportunities for assistance.

Psychiatric, Physicians Health (continued)

Friday, April 12

2:30 p.m.	"The Medical Family - A New Beginning" **Daniel H. Angres, M.D.**, Director of Rush Behavioral Health Center - DuPage, Assistant Professor of Psychiatry, Rush-Presbyterian-St. Luke's Medical Center, Downers Grove, IL **Kathy Angres, M.S.N., R.N.**, Family Therapist, Rush Behavioral Health Center, Downers Grove, IL Moderator: **Elizabeth Pribor, M.D.**, Chesterfield

Missouri **Radiological** Society

Objectives: To keep members informed of current issues related to radiology health policy and economics.

Saturday, April 13

8:00 a.m.	Breakfast
9:00 a.m.	Board of Directors' Meeting
12:00 noon	Luncheon
1:30 p.m.	"Economics and Health Policy" **Mr. Michael Mabry**, Assistant Director, Division of Economics and Health Policy, American College of Radiology, Reston, VA Moderator: **Roger Francis, M.D.**, Osage Beach
3:00 p.m.	General Membership Meeting
5:00 p.m.	Reception

■ ■ ■ ■ Scientific Program ■ ■ ■ ■

■ Missouri Chapter American College of **Surgeons**
Missouri State **Surgical** Society
American **Cancer** Society, Missouri Division

(see Cancer)

■ Missouri State **Surgical** Society
American **Cancer** Society, Missouri Division
Missouri Chapter American College of **Surgeons**

(see Cancer)

■ Missouri **Thoracic** Society
Missouri State **Allergy** Association

(see Allergy)

■ American **Medical Women's** Association

Objectives: After attending this session, participants will have a greater understanding of: 1) the potential of radiologic imaging and how it affects biopsy decisions, 2) the role of surgeons and radiologists when breast imaging is utilized during biopsy, and 3) new information regarding breast imaging.

Saturday, April 13

10:00 a.m. "Progress in Needle Core Breast Biopsy - When Do We Need a Surgeon?"

"Advances in Breast Imaging and Intervention for the Year 2000 and Beyond"
Mary C. Lechner, M.D., Medical Director of the Brattain Breast Center, Minneapolis, MN

12:00 noon Luncheon

1996 Convention Deadlines

Citizenship & Community Service:
This award honors a member physician who has served the community, state or nation in a special way. Past honorees include physicians who have helped a variety of state and community causes. Nominations should be submitted in writing to the MSMA office or through your local component medical society. *Submission of Nominations Deadline: January 22, 1996.*

Resolutions for Delegate's Handbook:
Resolutions may be submitted by individuals, component medical societies or groups of individual physicians. *Resolution Submission Deadline: February 26, 1996.*

Preregistration:
Please complete the form on the next page and return it to the MSMA office.

For more information, call the MSMA office at 314/636-5151. FAX: 314/636-8552.

■■■■ General Information ■■■■

Missouri State Medical Association's 138th Annual Convention to be held April 11-14, 1996, at Tan-Tar-A Resort, Osage Beach.

This Annual Convention will feature numerous activities and scientific programs in addition to the MSMA Alliance events. This is an excellent opportunity for you to participate in Continuing Medical Education.

All registrants are invited to attend the House of Delegate's sessions and reference committees.

Preregistration

Please complete and return the preregistration form below. Upon receipt of your form, MSMA will forward a confirmation card that is to be presented to the MSMA staff at the Convention registration desk. Your registration packet and name badge will be awaiting your arrival.

Continuing Medical Education

The Missouri State Medical Association is accredited by the Accreditation Council for Continuing Medical Education to sponsor Continuing Medical Education activities.

The Missouri State Medical Association designates the Continuing Medical Education offerings as Category 1 or Category 2 of the Physician's Recognition Award of the American Medical Association.

The American Academy of Family Physicians will designate the scientific programs for Prescribed or Elective Credit.

Hotel Reservations

The hotel reservation form on the next page has been provided for your convenience in making your hotel accommodations. Photocopy form and send to Marriott's Tan-Tar-A. ***Hotel reservations must be made prior to March 8, 1996.***

■■■ MSMA Preregistration ■■■

The 138th Annual Convention offers a large variety of educational activities. To assist you in attending these programs, we ask that you complete and return this convenient preregistration form.

Upon receipt of your preregistration form, we will send your confirmation card which you will need to present at the Convention registration desk. Your registration packet and name badge will be awaiting your arrival.

Please return to: MSMA, 113 Madison Street, P.O. Box 1028, Jefferson City, MO 65102.
FAX: 314/636-8552.

Name (last, first, middle) ____________________

Mailing Address ____________________

City/State/Zip ____________________

Component Medical Society ____________________

I will ____ will not ____ be serving as a Delegate.

I am a member of AMA ____ MMPAC ____.

Hotel Reservation

Marriott's
Tan-Tar-A
Resort, Golf Club & Spa

● **Group** ●
Missouri State Medical Association
April 10 - 14, 1996

Name ______________________________

Firm/Company ______________________________

Address ______________________________

City/State/Zip ______________________________

Phone ______________________________

Arrival Date: ______________ Time of Arrival: ____________ Departure Date: ______________

What major credit card will be used for payment upon check-out?

Card Type: ______________ Number: ____________ Expiration Date: ______________

Above card will be used to guarantee for late arrival.

These credit cards will be accepted for payment and deposit: American Express, Carte Blanche, Visa, Mastercard, Diner's Club and Discover Card.

Reservation requests must be received no later than March 8, 1996 to guarantee accommodations.
However, reservations may be accepted and confirmed up to the opening day of the Convention providing accommodations are still available and the group rate is not guaranteed.
Reservations are 4:00 p.m. the day of arrival until 12:00 noon the day of departure.

Requested Room Type

☐ 1 Bed ☐ 2 Beds ☐ Smoking ☐ Non-Smoking

☐ No Preference ☐ Sharing room with ______________________________

Group Rates

1 Person	$81.00
2 Persons	$81.00
3 Persons	$81.00
4 Persons	$81.00
1-Bedroom Suite	$150.00
2-Bedroom Suite	$200.00
Current Tax	8.225%

A deposit of one night's lodging is required to confirm reservations. Deposits are refunded only when cancellation notice reaches Tan-Tar-A's office 48 hours prior to arrival date. Your deposit will be forfeited if you arrive later or depart earlier than the indicated date.

Return form & deposit to: Marriott's Tan-Tar-A, Reservations Department, P.O. Box 188 T T, Osage Beach, Missouri 65065

Alliance Events

Thursday, April 11

10:00 a.m.	President's Report AMA-ERF Check Presentation Opening Session MSMA House of Delegates
11:30 a.m.	Past President's Luncheon
2:00 p.m.	Preconvention Board Meeting
6:00 p.m.	Reception honoring MSMA President and MSMA Alliance President
7:00 p.m.	AMA-ERF Benefit Dinner/Auction

Friday, April 12

8:30 a.m.	Opening General Assembly
12:00 noon	Award Luncheon
7:30 p.m.	Dutch Treat Dinner, Blue Heron

Saturday, April 13

8:30 a.m.	Second General Assembly
12:00 noon	Installation Luncheon
6:00 p.m.	MSMA Presidential Inauguration
7:00 p.m.	Reception honoring MSMA President and MSMA Alliance President

Children's Program!

sponsored by:
Missouri State Medical Association
and
Missouri State Medical Association
Alliance

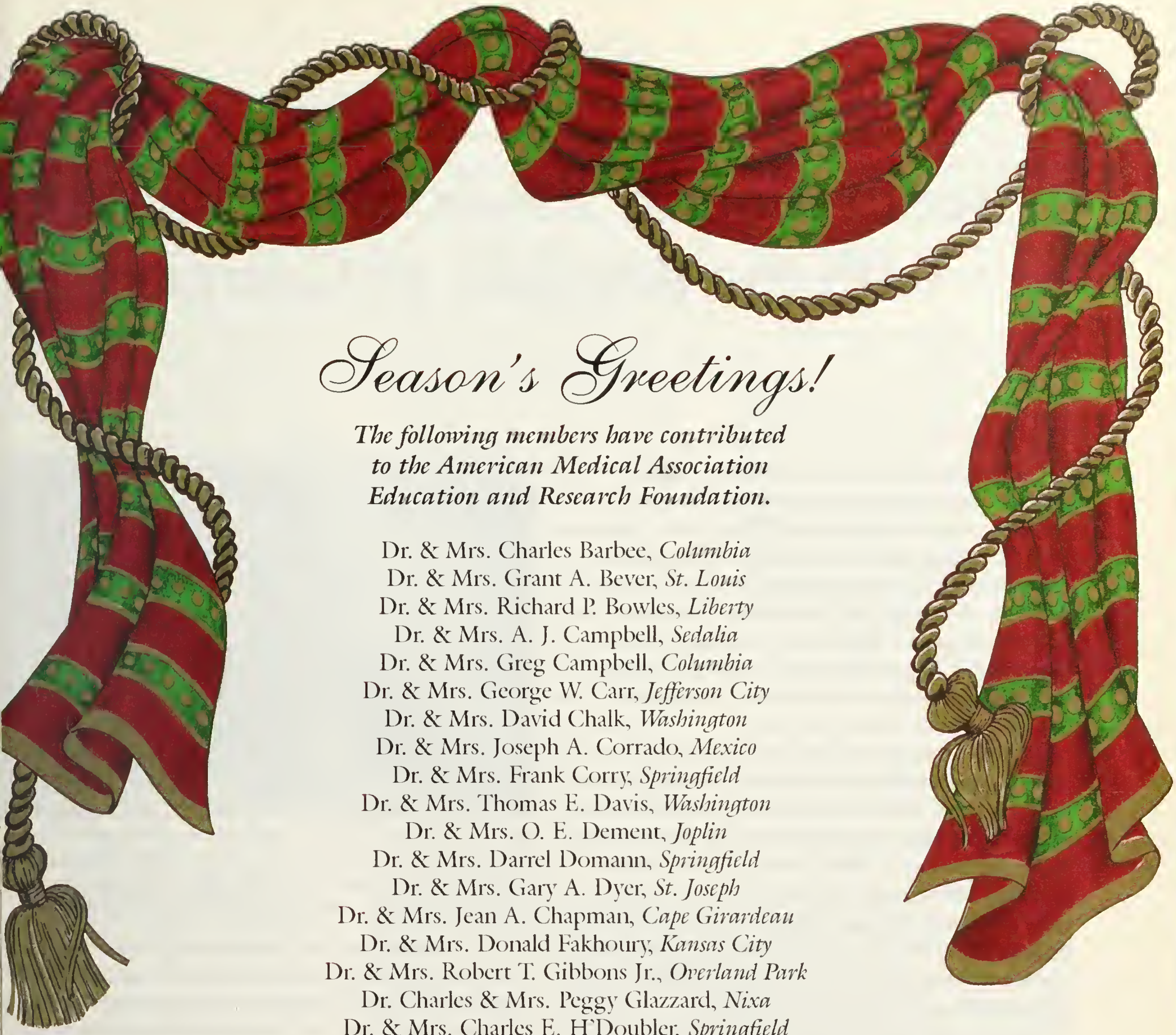
Watch for more information.

General Session

"Community Based - Physician Directed
Medical Model of Care"

Sponsored by:

Missouri State Medical Services, Inc.
on
Saturday, April 13, 1996
2:00 - 4:00 p.m.



Season's Greetings!

The following members have contributed to the American Medical Association Education and Research Foundation.

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Cover Story

Boone County Physicians Affiliate with the Republic of Georgia

By Ted Groshong, MD

Seventeen delegates from Columbia, several representing the Boone County Medical Society (BCMS), went to the Republic of Georgia in September 1995. The trip was the result of a formal affiliation between the BCMS and the Medical Association of the Republic of Georgia, the University of Missouri-Columbia's and the Tblisi State Medical University's schools of medicine and nursing, and also the First Baptist Church of Columbia and the First Baptist Church of Tblisi.

Georgia, a former Republic of the Soviet Union, gained its independence in 1991. Its history goes back before the time of the ancient Greeks. Situated on the silk route to China, it developed its own unique culture, highly influenced by Greece, Rome (it was a Roman province), Arab States, Turkey, and Russia. It has a unique written language, unrelated to any other, which extends back over a thousand years. The culture is rich with poetry, sculpture, music, and architecture - all playing a prominent place in everyday life.

For most of the last 2,000 years, Georgia was an independent country. Beginning in the mid-19th century it was incorporated as part of Russia. For three brief years, between 1917 and 1920, Georgia was an independent republic, until it was invaded by the Red Army and returned to Russian domination as a Soviet Republic. Joseph Stalin was Georgian, as was the last Foreign Minister of the Soviet Union, Edward Sheverdnaze, Georgia's current president.

Georgia is situated on the East Coast of the Black Sea, bordered on the North by the Caucases Mountains (and Russia), on the South by Turkey, and Azarbaijan and Armenia, also former Soviet Republics. The population is approximately five million people, about the same population and the same land area as Missouri.

While in Missouri in April, the dean of the Medical University of Tblisi and Dean Lester Bryant of the University of Missouri Health Sciences Center signed an agreement of affiliation. At center, Gia Tomadze served as translator.

The BCMS became interested in the Republic of Georgia, following a presentation in December 1994 by Trish Blair, MD. Dr. Blair is a graduate of the MU School of Medicine. She was trained in general surgery and practiced for many years for Kaiser Permanente in California. While there she served as director of disaster medicine and helped during the San Francisco earthquake. Her family lives in Columbia and she returned to try to develop a link between the people of Georgia, who she grew to love, and the people of Columbia. She has organized and served as President of ACTS International-A Call To Serve; a humanitarian aid organization.

Following the meeting, the BCMS executive committee voted to affiliate with the Medical Association of the Republic of Georgia. The medial association was formed in 1989, while Georgia was still part of the Soviet Union. As the first independent medical association in the Soviet Union, it was considered illegal and its leaders were persecuted. Today it has over 4,000 members and serves as an independent force to improve health care in that country. The President, Goga Lachkepiani, MD, visited Columbia in April 1995, with five of his colleagues from the only medical school in Georgia. A formal affiliation was signed in Tblisi in September 1995.

The delegation which visited Georgia in September included Susan Ailor, MD (dermatology), Mila Cunningham, MD (anesthesiology), Trevor Watson, MD (OB/GYN), Jennifer Clark, MD (PM&R), Elizabeth James, MD (neonatology), and Ted Groshong, MD, BCMS President. Beverly Murrell, MD, represented the Alliance. Each had a particular assignment related to her or his specialty.

One of the most important objectives of the Georgia Medical Association was to identify the organization and function of organized medicine in the United States. They wanted to know: How did we relate to the government? Were we in conflict? Do we advise them? Do they listen to us? - Good questions! Is it possible for a medical association to operate a modern hospital? How do you organize an office practice? What is the role of medical insurance? All important information to their task of completely reorganizing health care in a highly literate, but financially destitute country.

One of their physicians told me, “When we were part of the Soviet Union, we were told that the sun rises from the North. Today, the sun rises from the West.” This affiliation provides BCMS members the opportunity to help nurture a medical association in a newly independent country, and to help shape their health care system.

In April 1995, the rector of the Tblisi State Medical University, Ramaz Khetsuriani, MD, and the Dean of the University of Missouri-Columbia School of Medicine, Lester Bryant, MD, signed a formal document linking the two educational institutions. With it, the two medical schools agreed to exchange students and faculty to enhance the knowledge of both schools.

The Tblisi State Medical University is designed like Russian medical schools. Students are accepted from high school, and undergo six years of rigorous, lecture-based instruction. The seventh year is not part of a larger university, as it is in the United States, but is independent. There is no formal system of post-graduate education, though graduates may elect to continue in school and earn a PhD which qualifies them for academic title. There are no generalists, as such. To them a generalist is someone who does not specialize and is generally relegated to practice in rural villages. A generalist there operates not unlike a physician assistant. Specialists attain that distinction by attaching themselves to another physician for an unspecified period of time and then enter independent practice.

Until 1991, they all worked for the state - in some respects they still do. They receive a monthly stipend of $6 and collect small fees from their patients if they have the funds to pay them.

Medical students are to be seen and not heard. They patiently take notes, take exams which are very detailed, but do not participate at all in patient care. It is unheard of for a student to dare ask a question. Textbooks (those that are available) are hopelessly out of date. They have little, if any, access to current journals - the same goes for much of the faculty.

When the rector, and four of his faculty visited Columbia in April they were exposed to problem-based learning. It was a complete culture shock to them. The idea that students collaborate to learn basic science around clinical cases with only a facilitator was astounding to them. However, they were very impressed and decided to take the technique to Georgia. Ted Groshong, MD, Associate Dean for medical education at MU attended a seminar at the medical school in Tblisi in September to discuss medical education in the U.S. with their faculty. It remains to be seen what will transpire. However, the continued communication will only be beneficial.

As part of the agreement, the delegates from Columbia (now organized as ACTS-Missouri) plan to bring five medical students from Georgia to MU in January. They will begin by shadowing the MU students, many of whom have volunteered to serve as mentors. It is hoped to have the visiting students involved in electives to gain valuable clinical experience and knowledge of modern medicine in the U.S.

Plans are also underway to bring faculty to Columbia. The first professor, a pediatrician, will arrive in January to spend three years learning neonatology with Elizabeth James, MD. He plans to set up the first modern neonatal care unit in Georgia. **MoMed**

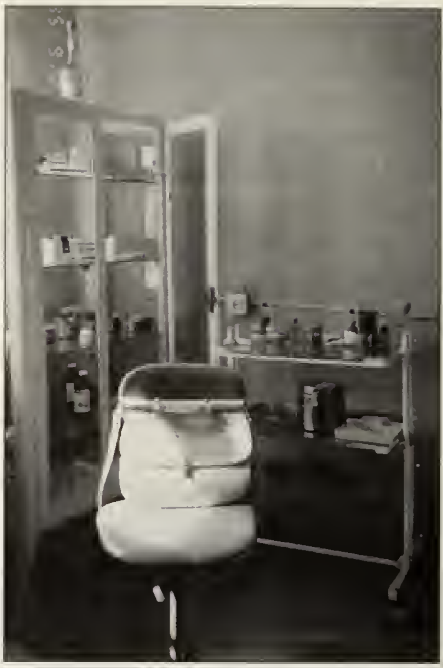
Taking on their problems

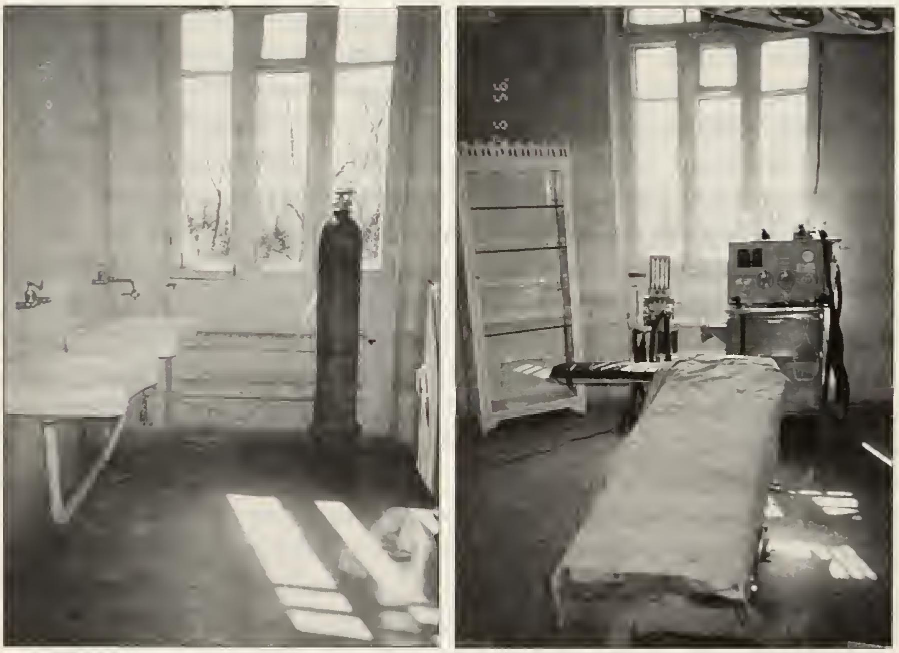
By Elizabeth James, MD

I was fortunate to be able to visit the beautiful Republic of Georgia during September of 1995. When referring to the Republic of Georgia, 'beautiful' is the first word that comes to mind. It is a beautiful country with beautiful people who are enthusiastic in their approach to solving problems. In this transition period of early independence and unbelievable needs and hardships, they remain open, hospitable, friendly and optimistic.

In the case of physicians, the problems which they face are almost incomprehensible to American physicians. As a physician born, educated, and practicing in the United States, I found their problems to involve many of the things we in this country take for granted: electricity; running water; heat in the hospitals; IV solutions, IV tubing; laboratory reagents; antibiotics; suture material; surgical instruments; gloves; and, pain medications for the children in the Burn Center.

As a neonatologist, I found a striking lack of equipment which physicians in the U.S. NICU's regard as a commonplace: incubators; cardiorespiratory monitors; pulse oximeters; transcutaneous oxygen and carbon dioxide monitors; umbilical artery catheters; mechanical ventilators; endotracheal tubes; infant laryngoscopes; radiant warmer beds; and transport incubators.


An OB/GYN treatment room in a Tblisi hospital. The chair is used for OB/GYN exams as well as the delivery of newborns.


An OR suite in a Tblisi hospital. Note that there are no supplies in the medicine cabinet.

Babies are transported between hospitals by taxi, when petrol is available. A blood gas determination requires 3-4 mL of blood, limiting the number of determinations which can be performed. Also limiting the number of laboratory tests is the sporadic availability of regents with which to perform those tests. X-rays must be obtained at a place remote from the patient care areas, and perhaps only at admission. Physical examination skills are well-developed, and must be relied upon extensively.

Absence of obstetrical equipment impact neonatal disease. Rhogam is not available, resulting in large number of infants with severe RH hemolytic disease. There is a lack of fetal monitors, and post-asphyxic encephalopathy, seizures and intracranial hemorrhage make up a large proportion of neonatal disease.

Laboratory equipment and technician in a Tblisi hospital.

For a physician who knows what needs to be done for a patient but is unable to do it because of lack of supplies and equipment and even lack of electricity and running water, the frustration is ultimate. Survival of infants under 1500 grams at birth weight cannot even be attempted, even though, given the support of what we in the U.S. have available, it would be technically possible **most** of the time. A Georgian neonatologist in Tbilisi spoke with obvious emotion of his love for low birth weight infants, but of the terrible frustration he feels in watching their current outcomes. The bond between us was instant.

During my tours of the various maternity and children's hospitals, physicians and nurses came from everywhere to listen, smile and show their facilities - and to bring me bouquets of flowers. Their love for Americans is intense, and eloquently articulated. Equally obvious is their extreme dedication to the babies and their desire to help them.

I left in October, only temporarily, having taken on their problems as my own, and hoping to become a part of their solution. MoMed

Dr. Elizabeth James is a Professor of Child Health and Obstetrics, and Chief of Neonatology at the University of Missouri Children's Hospital in Columbia. She is currently involved in setting up a model Neonatal Intensive Care Unit in Georgia.

And We are Bound Together by the Task that Lies Before Us .....

"Shed a Little Light," James Taylor Productions

By Susan Ailor, MD

...those words kept running through my mind as our group assembled through ACTS "A Call to Serve," headed to Georgia via Russia. For you non-James Taylor fans, the words capture the essence of a song honoring Martin Luther King, entitled "Shed A Little Light." Our group was male, female; tall, short; quiet, less quiet, and leaning toward rowdy; conservative, liberal; science and art. Yet we shared the common goal of finding a way to help this struggling republic that so desperately desired freedom.

My specialty is dermatology and I have served for the past few years on my Academy's National Committee on Sexually Transmitted Diseases/HIV Disease. My emphasis then was on AIDS education and evaluation of the present state of Georgian health as it related to STDs as well as availability of treatment, and the capability and willingness to test for the HIV virus and AIDS. The willingness to test was overwhelming, but the reagents and equipment to do so were nil or in sparse supply. At a time when water and electricity are not readily available, lab standards, hospital cleanliness, and even sterility, are difficult items to assure. But the willingness to test and the recognition of the need to test was impressive. Let us learn from that.

To address the country's concerns, an AIDS Institute had been recently formed at their Infectious Disease Center in Tblisi. The Infectious Center had asked that I speak with their staff about

Continued on page 756

Continued from page 755

AIDS and I walked into a room expecting to lecture to about 30 physicians, but instead walked into a lecture hall of about 250 people. Add to this situation that the morning and afternoon lecture sites had been reversed and for that reason my slide carousel was across town at the medical center, safely waiting for my now to be delivered afternoon lecture. A dermatology lecture without slides is a scary thought but in the end the lack of visual aids was not an impairment. With the help of a medical translator, the lack of pictures made for a most interactive exchange on both science and social concerns.

Oftentimes I thought, that as many of us that travel and are in a situation where we need a translator, it became painfully aware that a second language should have been an earlier goal for us. Following the lecture I was taken to see some anthrax patients at my request. Viewing the wards in hospitals, the realization that without medicines, equipment and supplies, the practice of medicine can be very intellectual but those thoughts cannot always be implemented into patient treatment.

I saw a patient with mycosis fungoides which the hematologist was aware that topical nitrogen mustard would be beneficial. However the medicine was not obtainable. There were also wards of hepatitis patients with scattered patients with severe immune deficiency without a diagnosis. Again if there are not kits or reagents to test with, there cannot be a diagnosis.

In a home study with a dermatologist in Kutasi, the home in which we lived was known as the "Dermatology House." His grandfather and father before him had been dermatologists and patients simply knew where to come. In his home I saw patients ranging from scabies to alopecia totalis. He had been appropriately worked up checking for things such as thyroid involvement and anemia, but now with the change of conditions in Georgia, there were no steroids, topical or injectable, or other chemicals as DNCB that were available to challenge for regrowth of hair.

Anthrax at the Infectious Diseases Center.

My host also graciously took me to his usual hospital. To get there we first walked six blocks and then he caught a "taxi" since he no longer has a car that is running. On some days another dermatologist would pick him up as they went to work. On the way we passed a local market where there was meat and cheese and vegetables to be bought hanging in the open air. At one time at this hospital, they would have patients on the wards but because of converting for "fee-for-service" and no one having the funds to be hospitalized, it was operating as an outpatient clinic.

At the clinic I saw a young child with atopic eczema as well as an older gentleman whose rash was consistent with dermatitis herpetiformis. Back home, I would have biopsied and waited to see if the diagnosis was confirmed so that dapsone could be started. While there though, you consider the disease you did not have the materials to do a biopsy and even if a biopsy could have been performed and diagnosis confirmed, there would have been difficulty in getting the medication. The next problem would be that the patient simply would not have the money to pay for it. The last obstacle being a concern for reliable follow-up testing for the possible side effects of dapsone.

Another gentleman had just been seen with diagnosis of syphilis. The visit and his medication totalled $3. Soon they would be out of their penicillin stores. Sterile syringes and needles were in even greater shortage. Yet an even greater concern was the "fee-for-service" coupled with the very few paying jobs in Georgia that meant no money for someone to pay for treatment. In the future they feared that even fewer male patients would come for evaluation. Without a diagnosis the secondary syphilis, which was already present, would again have a sharp increase. While other diseases as herpes and condyloma were also present, syphilis was a major concern because of congenital disease.

Unfortunately with the walls of Communism coming down, prostitution and illicit drugs have found their way across the borders of Georgia. As in all of history, with the good comes the bad. Without

New colleagues outside the Monastry Hotel in Tblisi, Georgia: Left to right, Peter Orr, DDS; Trevor Watson, MD; Ted Groshong, MD; Guram Amiridze, MD; David Edens, PhD; Susan Ailor, MD; and, Goga Lachkepiani, MD.

testing capability the incidence of infectious disease and HIV/AIDS will certainly increase. For Georgia, it is for lack of resources; for us it is a refusal to recognize the scope of our own problem at home.

Skin care in general becomes imperative in a country like Georgia where both water and heat are in short supply. The skin as a true protective barrier is all important because of lack of medication for resulting infections. Something as simple as a mild cleanser and a lotion can be a major preventive measure. Protection sexually in the form of condoms is almost nonexistent as are latex gloves for the use of surgical procedures because of lack of resources and funding.

I strongly urge us as Missourians to consider how we might help the struggling Republic. They are a country fighting for freedom in a difficult time. Their primary goal is one of survival in the next few years. Talk to your drug representatives and see if there are medications that might be forwarded on a compassionate basis; look at your office equipment and supplies and see if anything donated might be beneficial. Do not believe that anything is too small to be appreciated.

As we reach with our resources and heart to the distant land of Georgia let us also not forget those at home who are in need. Let us remember that in comparison our troubles and our worries are few and that *"we bound together by the task that lies before us - one of brother and sisterhood."*

They Need Supplies

Milamari Cunningham, MD
Anesthesiologist

The Georgians I met were enthusiastic, valued education and had a broad range of languages and discipline. All adults are at least bilingual in Georgian and Russian with many of them learning English and European languages.

Generally, the populous is thin. Oral hygiene is not emphasized, resulting in the older population not having front teeth in most cases. Food staples are bread and cheeses with meats and sauces. Wine and vodka are common. While most of the older population are tobacco users, the youth are beginning to recognize that smoking and drinking are not good for their health. The families are frequently small, ranging from one to three children. When there is little food and no hope, procreation is not a priority.

Their government covers the costs associated with emergency health care. It does not, however, provide coverage for routine or preventative health care. This results in patients feeling almost encouraged to wait for the bleeding ulcer episode instead of treating the gastric irritation with medication.

The Refugee Hospital is staffed with caring clinical people who try to provide medical care for their fellow refugees. The ancient World War II American military anesthesia machine which provides oxygen with an ether vaporizer is only providing oxygen. Halothane was provided instead of ether as an inhalation agent. The attempt to use Halothane in an ether vaporizer caused the it to become plugged and nonfunctional.

Choices for anesthesia include oxygen with IV agents including ketamine, tramadol, Valium and sublimaze. Other than manual pulse and stethoscope evaluation of heart and lung sounds, no other monitoring is provided. During our visit, a patient was recovering from a 3.5 hour hemigastrectomy.

The clinicians are providing remarkable care under extreme conditions. The endotracheal tubes are reused and soaked between cases. Last year, the surgical case load was 300 due to the lack of supplies to perform

Continued on page 758

Continued from page 757

more. There are no monitors other than the caregiver with a precordial stethoscope. There are few functioning ECG monitors in the ORs or the ICU settings. If they do exist, typically there is one per hospital that is nonfunctional due to a lack of repair parts.

The anesthesia personnel seem to have good clinical skills. Some of their knowledge is gathered from experiences in Moscow, Germany and Algeria. Given the constraints of few resources and poor physical plants, these clinicians are providing very good anesthesia care to their patients.

In Kutaisi, the anesthesiologist's pay is $2/month. Surgeons garner $6/month. Taxes on their incomes is assessed at a rate in excess of 33%. For comparative purposes, a fully tenured physics professor is paid $15/month without taxation. The American concept that anesthesia time and relative value for procedures could assist in the future, but, for now, they need monitors and drugs.

Families are often involved in monitoring at the bedside, even in the ICU, which seems to comfort the patient. The touching and comforting seen by the staff and the families within the hospital setting should be shared with Americans.

Their needs are many. Any help you can provide would be greatly appreciated. They need:

- Pulse oximetry
- Drugs like Ketamine, Halothane: Muscle relaxants, including nondepolarizers and depolarizers like Succinylcholine; Pancuronium;
- NG tubes;
- IV Catheters 18 and 16 (to serve a need of 50-60/month);
- Arrow central line kits;
- ether to clean machines;
- electrocardiography and automated blood pressure technology.

There is a great need to blend and mold the ideas from America, Europe and Georgia into the Georgian medial system of the future. As Americans, we can share our resources and our knowledge. However, we must allow the Georgians to incorporate those ideas with their own, rich heritage.

They Need Public Policy

Jennifer Clark, MD - Physical Medicine and Rehabilitation

The status of physical medicine and rehabilitation in The Republic of Georgia is mostly nonexistent. There is no one with expertise in this area and is greatly untouched. There are no occupational or physical therapists. The neurologists provide all physical therapy which is primarily modality and massage driven. There is little or no patient education or teaching and they really have not been introduced to goal setting or functional rehabilitation. They do not treat or assess back or neck pain and, for the most part, basically see neuromuscular disease, polio and cerebral palsy patients.

The medical system as a whole is very paternalistic. The patients lack knowledge of their condition and simple things they could do to prevent or manage their own problems i.e.: not smoking; limiting the use of alcohol; preventing pressure sores; getting appropriate amounts of physical activity or having knowledge of the normal progression of the condition. There is little teaching about basic bladder or bowel management which requires no drugs or devices, such as the Crede maneuver or rectal stimulation.

Many of the current health problems could best be addressed with a basic public health program and laws concerning safety. Prevention could literally employ several of the hospitals and would significantly impact their society. The following preventive measures could be addressed:

- simple vaccinations;
- scoliosis screening;
- blood pressure & glucose screens;
- DWI laws and education;
- AIDS awareness;
- a safe water supply;
- vitamins;
- locking transformers to prevent children from being burned;
- seat belt education;
- disposing of stray animals; and
- rabies shots for pets;

While there has been some attempt at vaccination, the system lacks documentation and the patients are unaware what they have been vaccinated against. In addition, vaccinations are done with dirty, reused or alcoholed-off needles, in many cases.

They lack basic inexpensive medications that could significantly affect quality of life, such as aspirin, Tylenol, cold remedies and sleeping pills.

There is a very high incidence of coronary problems. The system is able to provide cholesterol lowering drugs, unfortunately they do not have the means to check cholesterol levels or for HIV. Most doctors do not have stethoscopes or blood pressure cuffs, although hypertensive medications are available. They do have coronary angioplasty but cannot perform CABG procedures.

The orthopedic doctors have many concerns. This is the homeland where the Llarazov procedure was developed for bone lengthening. They perform beautiful, functional total hip and shoulders joint replacements with ceramic implants. I examined several of these patients and saw impressive results. However, the factory where the implants are made has closed. This procedure cannot be done now - except in rare cases when implants are obtained in Moscow at exorbitant prices.

There is a plethora of wards of children 2-6 years old in bilateral lower external soft tractions for congenital hip dislocation/dysplasia, aseptic necrosis and Legg Calve Perthe. Post-natal screening is non-existent, as the orthopaedic physicians have little to no training in pediatrics -- only surgery.

Often, they use unproven, disproven and illogical treatments for these processes as well. They have no advanced training, particularly in this area and scoliosis. They lose many children each year to cardiorespiratory failure from scoliosis, usually due to cerebral palsy or leg length discrepancy from congenital hip dislocations. They have basic x-ray equipment and some ultrasound capabilities but no functioning CT scanners or nuclear medicine.

Much of the dislocated hips and dysplasia may be due to the use of the traditional Georgian cradle. The children usually sleep in the cradle from birth to 4 years, and many children fall out of it, suffering fractures. Most Georgian families prevent this by binding the children's knees together at night, thus creating the above conditions in many cases. Obviously, education and redesign may help thousands of children.

The surgeons are generally caring, intelligent and quite creative with problem-solving, but are also in desperate need of some advanced or specialized training, particularly in pediatrics and updated medical education. Most of the physicians I met have read little due to lack of material. They have little continuing education after starting practice due to the lack of money and lack of availability of such training in an accessible area. They are starving for input, but all suggestions and teachings must be approached carefully so as not to insult them. They are very proud of what they can do.

There is great potential in all areas of medicine in Georgia, but it is in need of much work. They must be taught to use the few resources they do have in the most efficient way possible.

They Need Our Help

Trevor Watson, MD - OB/GYN

We found the Georgians with whom we had contact are warm and loving and people with needs. There was a contrast between East and West as to the dependence and independence from the Soviet system. The area bordering the Black Sea seemed the most dependent. They did not seem to desire the information we came to give as readily as did the people in Tblisi.

The hospital situation was much the same in both the East and West. In Tblisi, we saw pride and strength of purpose in the burn unit and the other hospital. In Kutaisi, there seemed to be a question as to where to start. The physical units were poorly constructed and maintained. By contrast, Tblisi showed a marked improvement. This was my impression of the health care workers, as well.

The arts were well done in all areas. The Russian culture is rich in the arts and equally so in the Georgian. There continues to be an interplay which benefits all.

We saw evidence of the Czarist times in some of the upper-class homes. The furnishings were in sharp contrast to the exterior appearances.

It is hard to tell what progress from private enterprise will occur before the turn of the century. For certain, those most capable of engineering the country in this direction will emerge and can be greatly helped by a visit to the U.S. and a stint in our schools. We see this and are making plans in this direction at the University of Missouri. MoMed

All donated books, medicines and financial contributions are tax-deductible. For more information, or to make a donation, contact ACTS Missouri, 1310 Old Business 63 S., Suite 4, Columbia, MO 65201. E-mail: mkxd61a@prodigy.com.

Medical Practice in Papua New Guinea

Melanie Elfrink, MD and Roy J. Elfrink, MD

Opportunities for medical service abound throughout the world. These experiences can allow development of clinical skills in the absence of advanced technology. We describe an eight-month experience in Papua New Guinea, including the most frequent illnesses treated and procedures performed.

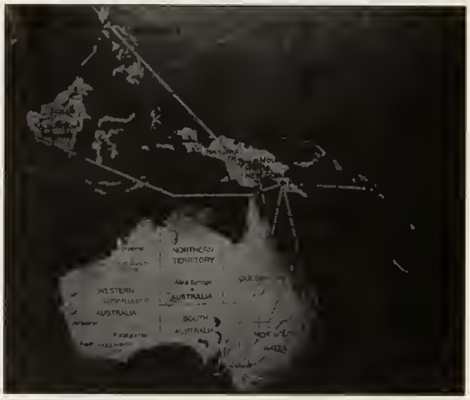


Figure 1

We recently had the opportunity to practice medicine and surgery in the country of Papua New Guinea. Papua New Guinea (PNG) is the island country 110 miles north of Australia and 4 degrees south of the equator. It consists of the eastern half of the second largest island in the world (Indonesia claiming the eastern half), as well as six smaller islands. (Fig 1) We lived at the Catholic Mission of Vunapope, located on the island of New Britain. The island supports a population of 255,000 and has a rich history and culture.

The terrain of PNG is rugged and brutal. With active volcanoes (having major eruptions last year), sheer gorges and thick rain forest, travel by land is extremely difficult. Because of this, ancient tribes did not communicate with others only a few kilometers away; thus there are many unique cultures and more than 700 languages spoken in PNG - over half completely unrelated. The common language that has emerged is "Tok Pisin" or Pidgin English. It combines many languages, especially German and English. It is easily understood if you use some imagination (e.g. Haus sik = hospital, namba won docta = surgeon).

The people rely mainly on subsistence farming; there are also major copra and coca plantations. An average plantation worker earns $40/week, which includes basic housing for his family, medical care, and in some cases school for his children. The people seem to have few material needs. Their dress, diet, and housing are very simple. (Fig 2)

The national people are used to hard work and many discomforts. Their views on health and illness are very different than in Western cultures - pain is accepted as part of the difficulty of normal life. Traditional healers remain important in most PNG cultures, and some very sick patients were taken home from our hospital by their families, convinced that traditional therapy might succeed where ours had failed. These beliefs were held deeply, even by many of the national nurses and Sisters at Vunapope.

We traveled to PNG in November 1992 with our children, Jacob (then 2 1/2 years) and Eden (1 year). We worked for 8 months at St. Mary's Hospital, a 250-bed hospital staffed by the Sisters of the Sacred Heart. The Sisters are German and have been in PNG for most of their lives (25 years or more for most). The hospital matron is a self-taught anesthetist who does general, spinal and regional anesthesia. Other Sisters staff the pharmacy and OB service, do community teaching, and help cook for patients without families.

The hospital is divided into wards including maternity, male, female, and pediatrics - each with 60 beds - and a 10-bed private ward. There are two operating

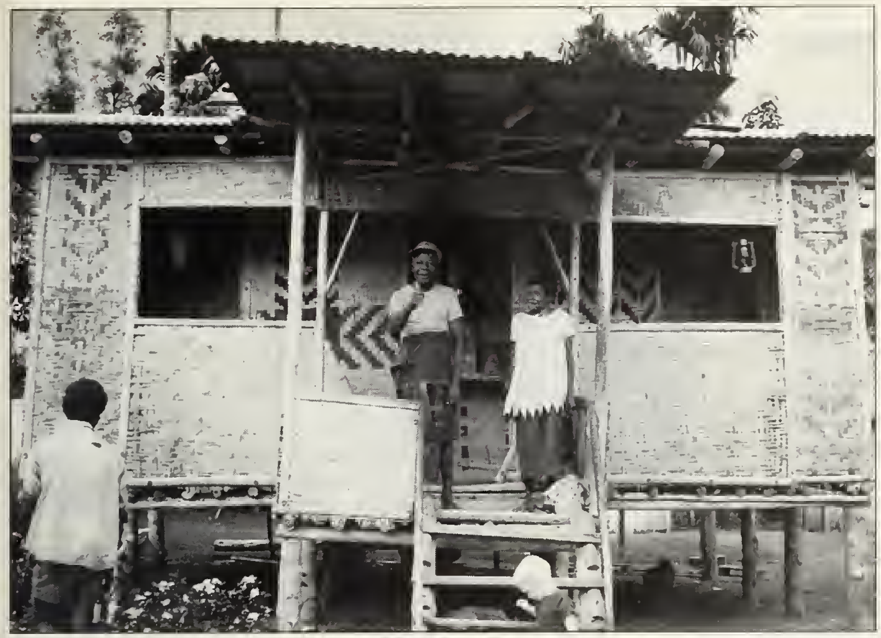


Figure 2

Table 1. Annual Statistics 1992
St. Mary's Hospital - Vunapope

Outpatient visits	72,828
Daily average	200
Admissions	9,032
Daily census	178
Operations	2,364
Deliveries	1,412
C-Sections	63 (4%)

Table 2. Available Technology

EKG	Cross-matching
U/A	Pregnancy testing
Basic X-Ray	Glucose
CBC	Cultures
Bilirubin	MPS (malaria parasite slide)

Note: Pathology for sepcimens was available with a turnaround time of six weeks.

suites: one for clean cases and one for contaminated cases (Fig 3). The outpatient nurses see an average of 200 patients daily, referring a handful of these to the doctor-on-call. (Table 1)

The technology available is seen in Table 2. The main medications used are chloroquine (malaria), quinine (complicated malaria), albendazole (worms), penicillin and chloramphenicol (severe pneumonia/infections).

The vast majority of medical care is given by experienced nurses trained at the nursing school on the mission. Their responsibilities include doing patient work-ups (including x-rays, blood work, spinal taps, etc.), making diagnosis and instituting treatment (including suturing and splinting).

The physicians (numbering two to five) act as consultants. During most of our stay, the physician staff included a general practitioner from Australia and another from New Zealand; Melanie, in family practice; and Roy in general surgery.

The actual patient care (e.g., feeding, cooking, bathing) is provided entirely by family members. There is a large open structure ("the haus kuk") where families prepared patients' meals. Patients were often accompanied by several family members, a practical and supportive arrangement for the "sikman."

The physicians' average day began with morning meeting at 7:30 a.m. to discuss admissions from the previous night, to share interesting cases, and to review x-rays. Other daily responsibilities included surgeries, patient rounds, teaching rounds to student nurses, or morning clinic. Monthly Grand

Continued on page 762

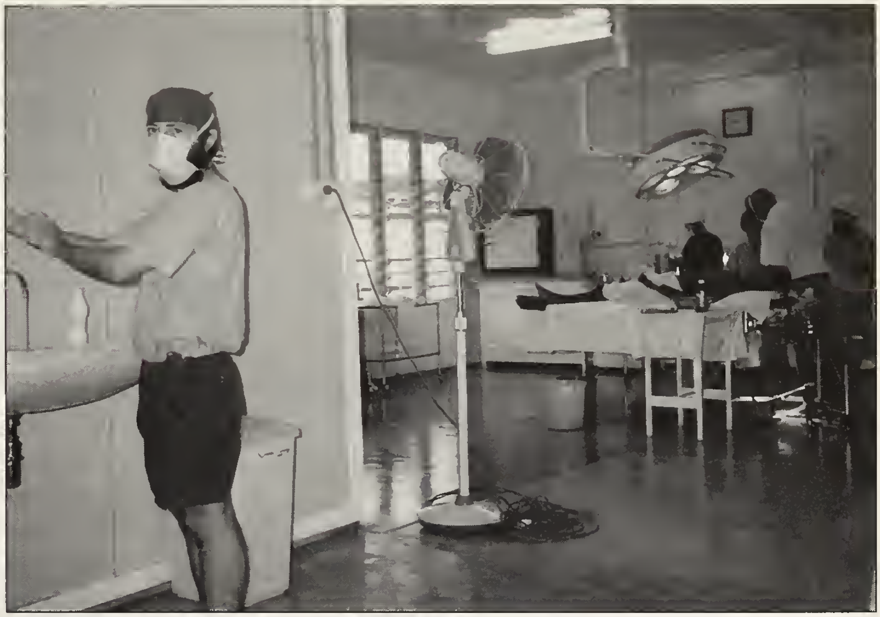


Figure 3

Continued from page 761

Rounds were attended by students and staff.

Infectious diseases made up the bulk of life-threatening conditions (Table 3 and Table 4). Fortunately, given the availability of only basic antibiotics, drug-resistance has been a minor problem, but is beginning to present a serious challenge.

The doctor-on-call had morning clinic and saw 10-20 patients, which included everything from cerebral malaria to leprosy. Morning tea was held 10:00-10:15 a.m., and was a strictly adhered-to routine and reminder of the Australian/British influence. Noon was "tim bilong slip" - nap time, always a blessing in the tropical heat. Then it was back to the operating theatre or clinic. Early afternoon theatre schedule consisted of patients lined up during the morning with abscesses or fractures. The abscesses (average 3-4 per day) were drained, and fractures set and casted. A listing of the most frequent surgical cases is seen in Table 5. Fees were low - 50 cents to $1 per day for ward stays, $5 to $10 for major surgery, which included everything from brain surgery to toe amputation. Patients who could not afford even this were cared for as charity cases.

Afternoon clinic was held for private patients who could afford to pay $20 for a doctor visit. This ranged from 20-40 patients and helped offset some of the other hospital expenses.

The day came to close at 5 p.m. People still waiting in clinic knew to come back the next day. Only emergencies were seen after hours, with most of these handled by the nurses, occasionally requiring physician input through the night.

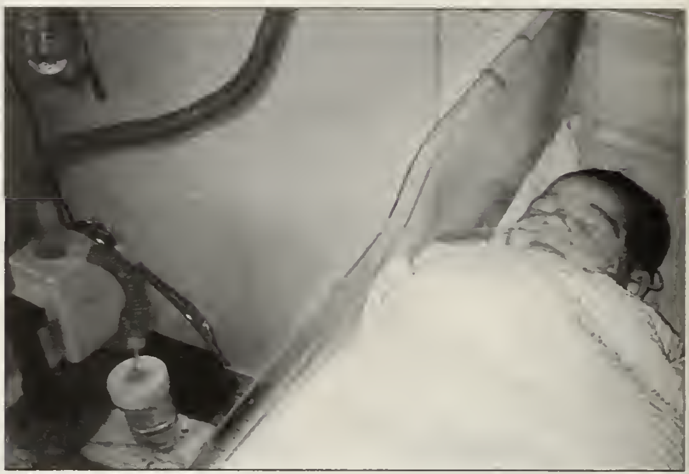


Figure 4

Table 3. Medical Top 5
(seen by one physician)

St. Mary's Hospital - Vunapope (6 months)

1. Malaria	293
2. Abscesses	160
3. Pneumonia	146
4. Fractures	84
5. Anemia	51

Table 4. Sub-Specialty Top 5
(seen by one physician)

St. Mary's Hospital - Vunapope (6 months)

1. Infectious disease	50.3%
2. Orthopedic	12.8%
3. Surgical/Trauma	6.1%
4. Pulmonary	5.1%
5. Gastrointestinal	4.4%

Table 5. Surgery Top 5
(By General Surgeon)

St. Mary's Hospital - Vunapope
(8 months)

1. Pyomyositis/Abscesses	408
2. Excision of soft tissue tumors	81
3. Appendectomies	63
4. Burn procedures	58
5. Debridements	51

Conclusion

We had time to enjoy the incredible beauty of this tropical island. There were excellent scuba diving and nature trips. The cultural differences were interesting, the most impressive being the lack of materialism of the national children. Their kids often happily gave our boys whatever toys or food they had, even if they were left with none.

Medically, we used this opportunity to hone clinical skills without technological back-up. With very few exceptions, the lack of technology made absolutely no difference to the patient's outcome, although it caused uneasiness to the physicians. We were impressed with the well-rounded skills of the national doctors. It was humbling to see people do so much with so little. An example of this was using an aquarium pump to construct a neonatal CPAP machine - it worked great! (Fig 4)

Personally, the experience was intensely challenging yet refreshing: certainly a time of personal and professional growth. It gave us the opportunity to appreciate the technology and unlimited supplies we enjoy in the States. We returned with better clinical skills and a better understanding of how medical care is delivered in one developing country. MoMed

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South American Warble Fly Comes to Missouri

Kevin J. Mott, MD and Philip C. Anderson, MD

Those learned men and women who explore our world, cataloging and documenting in detail as they probe into the most obscure corners of little known countries certainly deserve our appreciation, but also, they may need the benefits of our medical expertise. Professors at the University of Missouri-Columbia are among these explorers. In the dermatology department at the University Hospital & Clinics we have reported Missouri professors who have contracted Leishmaniasis, variously, both of the African and Central American types, we presented proven cases of cutaneous leprosy, and onchocerciasis as well as numerous cases of more trivial but still exotic bites, stings and jellyfish poisonings. These unfamiliar cutaneous diseases are almost never diagnosed at the first visit to the doctor, despite clear warnings in the patient's history. Most likely this failure is because foreign skin disorders (xenodermatoses) are not often seen, taught or learned. Invariably, returned explorers from central Africa with persisting typical cutaneous leishmaniasis on the back of the neck will not be managed by biopsy, but will be passed off as "pyoderma," until they travel through several clinics toward a diagnosis.

The first key to diagnosis is a question, "Where have you been?" Further history is needed. "Where did you sleep?" is useful. For instance, the explorers typically choose to leave the comfortable well-screened tourist hotels to camp in the brush. Sometimes they are invited by the tribal chief to sleep in the native hut for distinguished visitors. Unhappily some of these huts are disease ridden. Explorers are exposed to dangerous diseases far more regularly than tourists. They take excessive risks, often with enthusiasm. The following case of the zoologist in Peru illustrates these concerns and the need for elaborate tactics for an exact diagnosis.

Just as he was returning from a field trip in a Peruvian rainforest, a 41-year-old University Zoologist watched two red nodules grow quickly on his left hand. The lesions were painful and resembled small cherry red volcanoes between his knuckles. During his scientific survey of the lush rainforest vegetation, he had photographed a variety of plants and insects. He had handled venomous frogs from which poisons can be made for hunting birds. He had also bartered for poison blow dart guns with Peruvian natives.

Perplexed everyday by his fever of 102° F and his tender axillary lymph glands, he visited an emergency department, where, despite his fabulous history, he was treated with empiric oral antibiotics for presumed common pyoderma. Incision and drainage of the "furuncles" the following day by a surgeon was unrewarding. No pus or material for culture was taken. Although his fever did improve with oral antibiotics, the cherry-red nodules persisted and grew even larger by the time he was seen by the dermatology service. Additionally, he described a gnawing pain of a sharp, stabbing quality deep within his hand that lancinated up his arm and frequently awakened him from sleep.

A key finding was an eosinophilia of 13% as well as many reactive lymphocytes in his peripheral smear, both suggesting a metazoan parasite. Elsewhere routine blood cultures, chemistries and urinalysis had been entirely normal. We shaved off the larger of the two expanding nodules at its base and submitted it for histologic examination as well as aerobic, anaerobic, fungal and mycobacterial AFB cultures. The final evidence needed to solve this exotic cutaneous mystery arrived a few days later when a small amount of white exudate in the base of the biopsy site protruded from the wound and began to crawl forward. The astute zoologist grasped the creamy white debris with a forceps and delivered a 1.3 cm larva. The larva was identified, employing invaluable expertise from Robert Hall, PhD, from the entomology department, as Dermatobia hominis, from the South American Warble fly.

Discussion

Furuncular myiasis is a condition common in that Peruvian rainforest, resulting from invasion of mammalian tissues by the larvae of several different species of fly. In central and South American, Dermatobia hominis is medically the most common and fascinating intruder into the skin of explorers. The infestation begins insidiously after the eggs are deposited on the skin of the unaware host (usually cattle, dogs or man). The comforting warmth of the skin stimulates the eggs to hatch. The larva then burrow into the skin to complete development before re-emerging approximately 50 days later. The life cycle of this scheming parasite is fascinating for its cunning manipulation of other insect vectors (particularly mosquitoes), a practice termed phoresy. The adult Dermatobia fly seizes its unwitting accomplice by the wing in mid-air before depositing the eggs on the victim's abdomen. It is actually the guileless mosquito who then places the eggs on the unsuspecting host.

Dermatologically, soon after penetration of the skin by the larva, a small 2-3 mm papule develops that is not likely to be noticed in a bug-ridden jungle. The tiny papule soon enlarges into a dome-shaped nodule, at which point the clinical appearance may resemble a furuncle, particularly when the lesion becomes pointed as the posterior end of the larva protrudes from the wound. What appears to be intermittent foul-smelling discharge, commonly mistaken for "pus" actually represents sloughed larval remnants. The dramatic appearance of the lesion is overshadowed only by its symptoms. Severe piercing pain, a reliably classic symptom of myiasis, is attributed to the tearing of the host's tissues by the oral hooks of the larva during feeding. Removal of the larva is in itself curative. Locals have been known to secure a portion of pork fat over the lesion to induce the larva to evacuate its adopted human home. As in this case, because the larval cycle is long, the disease may only manifest after a patient has returned home from an indigenous region.

Without diverse library resources and easy access to many specialists, diagnosing these obscure xenodermatoses would be extremely difficult, if not impossible. We depend on collegial assistance and services from local entomologists, herpetologists, botanists, ecologists, xenoepidemiologists, mycologists, and microbiologists, each of whom enjoys good networking with their colleagues in foreign countries. The medical care of explorers demands the best of this very group of scientists who are at risk for contracting these unusual diseases when leaving the friendly confines of the university and straying off into the wild. MoMed

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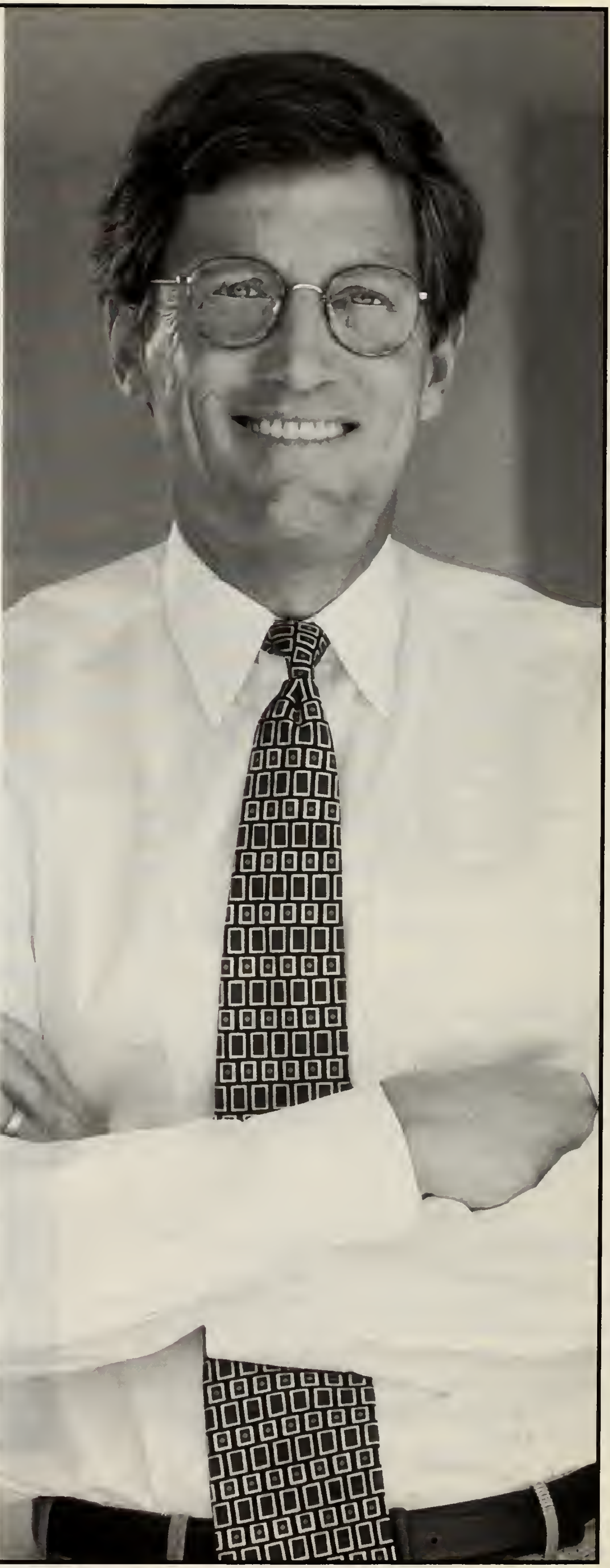

Index to *Missouri Medicine* 1995, Vol. 92

A

Alliance Message
Alliance Day at the Legislature 33, 61
Fight Alcohol and Drug Abuse 683
  Eileen Chalk
Holiday Sharing Card 751
Installation of Nona Nan Chapman 246
  MSMAA President
Jean Wankum's Address to the 247
  MSMA House of Delegates
MSMAA - Tell Your Spouse About Us 446
March is Medical Alliance Month 148
Nona Nan Chapman, MSMAA President 167
Preliminary Program 748
Sandy Mitchell, AMA President-elect 323
SAVE Today Program Kick-off 684

C

Classified Advertisements
49, 100, 154, 202, 260, 311, 364, 552, 604, 656, 712, 767
CME Calendar
50, 98, 152, 200, 258, 308, 362, 602, 654, 711
Codes
Component Medical Society Codes 408
Primary Specialty Codes 446
Cover Art
January Dennis Weiser
February Tammy Belt
March Marilynne Bradley
April Dennis Weiser
May Carla Steck
June Carla Steck
July Carla Steck
August John Odell
  "Wildflower Garden: Shaw Arboretum"
September A Allen
October Suzanne Haynes Sword, MD
November A Allen
December Carla Steck
Cover Story
The Board of Healing Arts is solving 74
  problems by communicating with physicians
The Board and the MSMA Physician 77
  Health Program share rehabilitation goal for
  impaired physicians
Boone County Physicians Affiliate 752
  with the Republic of Georgia
BRIDGE: A Community-Based 685
  Advocacy Program for Battered Women
  in the Emergency Department
  RL Muelleman, KM Feighny, CC Bozard, L Bergin
MCADV Information 688
Physicians Respond to Patients' Needs 22
Research Will Lead Us to a New Wave 638
  of Treatment for HIV Infection - *D McKinsey*
The Role of the Physician in the 286
  Dynamics of Change Under Managed Care
St. Louis Medicaid HMOs discuss the 338
  Managed Care Plus (MC+) Program
The Tax Man Cometh 176
Women in Medicine Month: An 584
  Interview with MSMA Physicians - *L Starnes*

E

Editor's Desk - JR Thomas
It's 6 a.m., Do you know where 7
  your children are?
Getting To Know You 58
Ethics and Research 110
Writing It Right 162
On spitballs and bubbles 269
Hormones and Highways: 561
  A dangerous mixture for teenage drivers
Minding Your Manners 613
Shame 665

F

Federation
Reinventing the House of Medicine: 566
  The Study of the Federation - *GM Bohigian*
Financial
Missouri HMO Update 295
IRS Offers Tax Information 177
Mutual Fund Investing: 182
Keeping Track May Keep Taxes Down 182
  M Taheri
To Prepay or Not Prepay? 616
  That is the question - *M Taheri*
The Tax Man Cometh...-*S Dulle, L Harris* 176

G

Guest Editorial
Providers, Insurors & Payors 720
  How do they interact? *D O'Sullivan*

H

Historical Record
100 Years Ago 47, 102, 151, 198, 312
50 Years Ago 47, 102, 198

I

Info. for Contributors 41, 89, 187, 297, 644
In Memoriam
January 18
Ashcraft, Walter A; Braunschweig, Ralph R; Bruce, Helen L; Drabinowicz, Sallie "Lisa" Elisabeth; Gaston, Samuel L.
February 70
Bay, Merrill R; Dukstein, Walter G; Rockwell, Wayne L; Schwartz, Edith Robinson; Stauffer, Harry.
April 172
Cohrs, Clarence C; Macnish, James M.
June 283
Hawkins Jr., George L; Kiekhaefer, Theodore C; Klein, Edward H; Mosbacher, Hugh E; Raich, Robert A; Stewart, Walter L; Williamson, Walter E.
July 336
Belden, Edgar Armistead "Armie"; Goldfarb, Alvin; Glover, Kenneth; Hopkins, Thomas J; Jacobs, Charles; Lentz, Clark H; Petrie, Roy H; Slentz, William A; Willimas, John M.
September 577
Blankenship, George W; Bowdern, Edward H; Johnson, Richard E; Smith, Garland F; Stricker, Eamil A; Trowbridge, Barnard C.
October 694
Duncan, Robert D; Hodgson, Frank H; Kelly, R. Emmet; Loeffel, Ellen Shattuck; Moore, DeArmond; Rubenstein, Melvin.
December 734
Adams, Robert; Burns Robert; Milster, Clyde R; Mothershead, John L.

L

Legislation, Legislature
Alliance Day at the Legislature 33
At the Capitol 61, 272
Contacting Legislators 59, 163
Key Contact 32
Patient Fairness Act 24
Intractable Pain Act 27
Insurance Reform Bill 29
Issues 30
MMPAC 33
Missouri Senate 35, 36
Missouri Representatives 37, 38
Letters to the Editor
Ashcroft, John 322
Beitman, MD, Bernard D 322
Bennett, Tom 322
Blaine, James R 563
Crowley Jr., MD, William J 562
Cruz-Flores, MD, Salvador et al 296
Goldman, MD, Gordon 322
Hunter, MD, James K 322
Kaskowtiz, Lawrence S 322
Quick, Edward E 61
Vande Lune, MD, Daniel W 296
Whiting, MD, FACC, FACP, Richard B 164

M

Medicaid
Managed Care Plus (MC+): The Wave 211
  of the Future for Missouri Medicaid?
  E Jenkins
St. Louis Medicaid HMOs discuss the 338
  Managed Care Plus (MC+) Program
Medical Legal
Can Missouri Health Care Providers 581
  Be Held Liable Product Under Srict
  Liability Law?- *CH Cole*
Contracting with Managed Care 671
  R Watters, S Vogelsmeier
Family Violence - *M Beck* 333
Overview of 1995 PIAA 624
  Breast Cancer Study - *AK Bennett*
What's New with Peer Review? 725
  JA Morrow
Medical Students 280
Membership Notes
15, 68, 120, 172, 228, 282, 336, 576, 634, 677, 734
Missouri Patient Care Review Foundation
Retrospective Analysis of the Utilization 588
  of Right-Sided Cardiac Catheterization in
  Association with Left-Sided Cardiac
  Catheterization in Patients with Coronary
  Artery Disease - *GJ Fortune, EA Ballas, B Hegemann, RC LaFerney, T. Luebbering, HJ Neikirk, R Weathers*
Outcome Variations for BPH-TURP 640
  Patients - *D Hardy, S Elder, J Pirner, B Hegemann, GJ Fortune*
Missouri State Medical Association
Committee & Commissions 380
Component Medical Societies 397
Component Society Codes 408
Constitution & Bylaws 388
Executives/Secretaries 397
Financial Statements for 1994 123
Insurance Options for Members 378
Map & Guide to Districts, Councilors 407
  and Counties of

Medical Specialty Organizations 400
Membership Rosters
Alphabetical Roster 409
Component Society Roster 477
Primary Specialty Roster 447
Residents Section 545
Students Section 280, 548
Photographs
Officers 373
Councilors 374
Vice Councilors 375
AMA Delegates 376
AMA Alternate Delegates 376
Policies 398
Political Action Committee Members 398
Practice Specialty Codes 446
137th Annual Meeting
Alliance Presidential Speech, *NN Chapman* 246
Committee & Commission Reports
Communication Project Oversight 239
Constitution & Bylaws 239
Continuing Education and Health Manpower 242
Continuing Medical Education 245
Interspecial ty Medicine 242
Legislative Affairs 272
Medical Economics, Third Party Medicine, and Governmental Relations 245
Missouri Physicians Health 240
Publications 242
50-year Physicians 174
House of Delegates
Delegates Present 230
Minutes of 230
Resolutions of 234
Exhibitors 220
Final Address by *HJ Murrell* 244
Presidential Inauguration Speech *F Hahn* 212
Registration 249
138th Annual Meeting
Preliminary Program 680, 739
MSMA Health Education Foundation
Financial Statement 136
Video Medical Stories Begin State Syndication 344
Missouri State Medical Foundation
Financial Statement 130
The Board and the MSMA Physician Health Program share rehabilitation goal for impaired physicians 77
MSMA Physicians' Health Program
Financial Statement 132
Recognition of Contributors 21
MSMI, Incorporated
Financial Statement 138
MSMS Reports
Financial Statement 134
Physician Leadership: Part 4 Directing the Process of Integration *T Bennett* 10
Physician Practice Acquisitions and Mergers: Medical Practice Valuation *T Bennett* 57

N

New Members
January 16
LK Reno; S Braddock; LJ Dotson; FG Rieger, III; T Spaedy; DW Asbury; CL Chan; BS Dara; DA Edwards; CD Simmons; RJTipton; BHYuen; BD Spinzig; SM Butler; JM Roberts; JW Neely; CE Tanner; BK Takagi; LM Hunter; EC DeCastro; MJ McDonough; A Santin; TM Sundt; TK Wilhite; EJ Bessonny; JE Del Rosario; CM Dresler; JM Foss; GL Gambill; MT Grimm; PE Krucylek; RA Nye; PK Schultz; CJ Siegried. **Residents:** DE Banet; KC Freeman; H Pomeranz; H Rafael. **Students:** *St. Louis University* - SD Blair; NR Blanchat; EM Finley; KM Gauvain; BE Goertz; WM Irving, Jr.; T McNichols; E Pan; JF Recasens; KT Ward.
February 69
LR Handlin; C Rogers; MF Ewy; DJ Meyer Jr; EM Millwee; MS Severance; L Behm; VR Cipperly; JL Cox; PS Dunlap; EM Esguerra; RD Schooler; B Stein; OP Trentham III; PS Miller; LA Riojas; MA Hassen; D Raskas; RS Arora; TF Reed; SL Brown; DF Butler; PE Cryer; JM Foss; SK Joshi; DJ Schwarze; FP Walters; LB Weinstock. Residents: EW Ferguson; LE Seals.
March 121
SM Dresner; CE Bosley; SP Sugarbaker; BK Hoke; SM Arkin; IL Belson; BE Davis; LL Dill; RG Kuckelman; JR Kunin; DB Lyon; AC Montoya-Vinluan; RJ Mundis; RD Rondinelli; SK Starr; TA Walline; WL White; RP Hernandez; MJ Brischetto; DA Nile; EE Smith III. **Residents:** BJ Albracht; CD Barbieri; ML Davis; H Fischer; CA Guillaume; BV Joachims; MT McKay; VP Messmore; JL Mitterando; SG Nolker; GP O'Connell; TL Prichard; MK Randolph; SL Regas; WW Rucker; PJ Schleicher; MJ Slattery; AK Smith; FW Swearingen; RL Warren; Michael A. Yoesel. **Students:** *St. Louis University* - R Barbosa; RA Felkel; L Gannon; J Gutting; BK Jeffords; CT Johnson; ML Johnston; LJ Mine; J Monson; K Morse; JJ Plewa; JR Robison; MA Sopuch; F Wagner; JP Yannette. *University of Missouri-Columbia* - CR Conway. *Tufts University* - ML Plocher.
April 172
DR Berson; RA Bligh; WH Chou; EM Kanlic; JV Miravite; S Mutha; MA Varvares; DE Melchior. **Student:** *University of Missouri-Kansas City* - DP McBride.
May 229
JD Hirsch; WS Muro; JS Hata,; JW Parker; JL Teague; JE Fogartie Jr; R Zipper; T Hare; TA Hopkins; TR Nye; KL Ripperger; SC Ellis; S Ethirajan; JP McCullough; SD Nash; SA Pastor; TS Samuelson; S Stevens; JA Thesing; E Wheeler; EE Young; KM Coordes; GW Farley; DS German; RS Johar,; WK Kapp III; A Triantafillou. **Residents:** S Reikes; PL Suarez-Solar. **Students:** *St. Louis University* - WT Manard. *University of Missouri-Columbia* - AA King;G Reser. *University of Missouri-K.C.* - EJ Lingenfelter; LE Summers.
June 285
SA Carder; JM Craig; FS Dattel; ES Levy; TS Sutton; PD Bernhardson; SA Dolan; DP Robinson; MJ Krahn; HW Follis; T Winkler; MA Boice; RK Gailey; SO Pintado; SK Bonar; TM Brady; LA Silwance; SR Smalley; AD Snow, Jr; ML Waldschmidt; LD Spurlock; BE; R Rao. **Residents:**SF Jafri; MC Contogiannis;LA Goldenberg; CB Boswell; NS Havlioglu. **Students:** *St. Louis University* - JA Kohout.
September 578
TM Farrell; CH Leicht; AJ Scharrer; RW Burns;LM Puckett; JE Fogartie Jr; WL Schlegel; CP Smith Jr;RL Brown; JW Cram; JA Duff; MH Entrup; MR Goler; DW Hamre; DB Holley; KW Larson; KW Neu; CA Nordhues; LD Reed; JL Ritter; CB Rotton; JE Shoop; DM Sullivan; BG Bellamy; A Forker; FD Koch; SB Laster; M Ahmad; SM O'Donnell; KG Gunter; RH Gelberman;EB Morgan; M Morgan; KC Recchia. Residents: S Anderson; AM Awad; MD Beasey; DR Bennett; BD Bergen; HH Bonourant; H Borhani; FM Chow; WT Dierenfeldt; MS Gowda; A Jamal; JN Keeler; E Kuganeswaran; DC Luetkemeyer; MF Majeed; D Marietta-Nunez; MM McBride; J Nair; TJ Passe; DM Pennington; BRoshan; T Sahebjamei; NO Soghrati; V Soundararajan; J Thaker; PK Woodard; D Woolridge; DC Youmans.
October 636
JW McDowell; JH Bauer; JR Blair; BW Kuvshinoff; JG Latour; DC Dobyan; RM Dunn,; EC Gamboa; BK Goins; PJ Hoehner; CK Johnson; JP Karasek; KF Karasek; GS Nadolski; JOrtiz; MA Parish; KB Vaniver; JG Adams Jr; DR Anderson; DC Coonce; DM Deisher; ML Gates; M Kapp; WK Kapp; J Seabaugh; JL Thomas; RB Voszler; WA Wynkoop; RJ McDonald; BJ Treacy; FE Youngblood; TH Garrett; CRB Beckmann; A Gottlieb Kunin; SS Nigh; EH VandenBoom; SN Trent; DS Fitzwater; RA McKeown; JE Thompson Jr; RL Phillips; JJ Sears. **Students:** *St. Louis University* - M Eason; L Wang.
November 679
AK Ranginani; JE Montie,; NT Belz; HJ Benedict; JM Dominquez; JM Fusselman; LR MacGorman; JM Shelly; GS Stamps; WR Black; RA Gallemore; DJ Park; R Chandra; JC Cardone; MT Hartley; RJ Lombardo; M Ahmad; SA Faruqi; K Chao; BB Daily; JW Dimitroff; RS Gahn; MF Kohm; AE Krutchen; BD Law; TK Lee; PS Lele; J Makhoul; AP Navato; JV Patel; CM Perry; GR Saboeiro; MF Thomure; KL Threlkeld; RW Wright; N Ghazal-Albar; RK Sindhwani; Z Hamid. **Resident:** TA Quinn.
December 735
PD Perll;NE Baumgartner;VI Morgan; SL Allyn; DR Black; BA Bumberry; JA Dye; RD Haskins Jr.; LS Hornstein; WR Reynolds; DM Sherman; PE Hennan-Hain; CH Roberts; PD Robison; BK Steele; J Tupper; TL Williams; GA Bliss; SD Kaster; M Moaddabi-Araghi. **Residents:** YP Patel; B Volshteyn. **Students:** *St. Louis University* - BY Albano Jr; EJ Cunningham III; JA Goldstein; M Murray. *University of Missouri-Columbia* - MA Beckerdite; MJ Conklin; LA Cross; SL Duncan; D Farrel; AL Fick; AT Haber; BA Hinderks; TD Scheidt; CM Schlanger; R Srivastava; LM Strauser; LK Sunday; ME Thornburg; JW Albovias. *University of Missouri-K.C.* -MA Arnall; K Chaudhary; DT Hoang; B Houser; J Keck; R Knight; J Konijeti; BE Lapka; E Lee; T Markley; KC Moylan; TM Patton; CM Urena; AE Waitman; J Wright.

O

Otolaryngology Quiz
71, 113, 169, 225, 277, 329, 569, 621, 675, 731

P

Perspectives
The AMA Wants Physicians' Views on Private Health Care Plans, Including Managed Care - *AH Gale* 574
Can American Democracy and the Profession of Medicine Survive the Giant Managed Care Oligopolies? Justic Louis D. Brandeis and "The Curse of Bigness" *AH Gale* 290
Community-Based Teaching of General 274 Internal Medicine to First Year Medical Students - *JC Bauer* 184
Echoes from Washington University, Class of March '43 - *WE Wooldridge* 274
Fat Chance - *JA Carrier* 618
A Managed Care Specialist - *RV Bradley* 63
Managed Care Strives to Escape Accountability - *AH Gale* 116
New Report Exposes Trial Lawyer's Political Clout - *AH Gale* 8
The New Social Engineers of the 90s: Federal Trade Commission and Department of Justice Anti-Trust Division - *AH Gale* 628
Poignant Pearls from the Past *WE Wooldridge* 668
The Role of the Physician in the Dynamics of Change Under Managed Care *T Bennett* 286
Physicians' Recognition Awards 16, 120, 173, 228, 284, 578, 677
Practice Management
Developing a Physician-Directed, Community-Based Managed Care Network *T Bennett* 216
HEDIS - What is it? What does it mean to me? How does it affect my practice? *R Treadwell, J Treadwell* 336
Physician Directed Networks: The Renaissance Perspective *T Bennett, M Wood, T Allen* 734
Physician Leadership: Part 4 Directing the Process of Integration *T Bennett* 10
Physician Practice Acquisitions and Mergers: Medical Practice Valuation *T Bennett* 57
Providers, Insurors & Payors How do they interact? *D O'Sullivan* 720
Tax-Exempt Integrated Delivery Systems: Part 1, Federal Anti-Kickback Laws - *PL Vogel, HM Cripps* 331
Tax-Exempt Integrated Delivery Systems: Part 2, Stark I and Stark II *PL Vogel, HM Cripps* 572
President's Message - F Hahn
The Answer is, "NO! Chess for Fun" 564
The Golden Egg 321
The House of Medicine 667
Managed Care Disrupts the Patient-Physician Relationship 270
One-on-One Cost Accounting 614
President Profile
Frederick Hahn, Jr, MD, MSMA President 1995-1996 165
Public Health Reports
Lyme and/or Lyme-like Disease in Missouri - *EJ Masters, HD Donnell* 346
Managing the Journey of Change: Assisting Communities in Assessing and Improving Community Health Status *ME Dempsey* 81
Prostate Cancer Incidence in Missouri: An Updated Analysis *JC Chang, RA Hagan, BR Malone* 693

S

Scientific Articles
Acute Poisoning from Gamma Hydroxybutyrate (GHB) *MT Steele, WA Watson* 354
Barrett's Esophagus: A Review *DR Sawyer, WE Longo, KS Naunheim* 645
A Comparison of the Restraint and Seclusion Experiences of Patients with Schizophrenia or Other Psychotic Disorders *K Sagduyu, RD Hornstra, S Munro and V Bruce-Wolfe* 303
De Novo Malignancy After Renal Transplantation *MW Smith, SK Rose, SM Lal, G Ross* 90
Decisions in Severe Extremity Trauma *JO Anglen* 140
Early Clinical Experience with Percutancous Cryosurgical Ablation of the Prostate *AS Hawatmeh, FP Walters, CA Wooster* 705
Efficacy of Thymectomy in Myasthenia Gravis *G Hayat, YA Mohyuddin, K Naunheim* 211
Health Status of Asian Pacific Americans in Missouri - *IWG Kwon, M Bae* . 648
Medical Practice in Papua New Guinea *M Elfrink, RJ Elfrink* 762
Osteochondroma of the Scapula *JF Galate, JM Blue, RW Gaines* 95
Post Tonsillectomy Hemorrhage: A Ten-year Retrospective Study *WA Schroeder* 592
Post Tympanostomy Otorrhea *WA Schroeder* 193
Pseudoaneurysm of the Left Ventricle Presenting as Congestive Heart Failure without Ischemic Chest Pain or Q Wave Infarct - *JI Lipoff* 358
Radiation Therapy in the Treatment of Localized Prostate Cancer: An Alternative to an Emerging Consensus *CA Perez, J Michalski, MA Lockett* 696
Rare Primary Signet Ring Carcinoma of the Pancreas *CP McArthur, R Fiorella, BM Saran* 299
Are Serum Levels of Vancomycin Useful in The First Week of Therapy? - *E Goldstein, WR Bartholomew, MK Vickers, T Parr* . 596
South American Warble Fly Comes to Missouri - *K Mott, PC Anderson* 766
Stereotactic External Beam Irradiation Using A Linear Accelerator: The Washington University Experience *JR Simpson, KM Rich, RE Drzymala, TH Wasserman, EE Klein, M Michaletz-Lorenz, J Maurath, E Filiput* 188
Stereotactic Surgery in the Management of Intracranial Disorders - *EV Colapinto, GA Brandenberg, JJ Oro, DF Jimenez* 42
Voice Rehabilitation After Laryngectomy *H Boyd, MA Varvares, S Fitzmaurice* . 145

Directory of Names

Ahlum, MD, Sandra 237
Ailor, MD, Edgar I. 16
Ailor, MD, Susan 755
Allen, Angela M. 74
Allen, MD, Tom 734
Anderson, MD, Philip C 764
Anglen, MD, Jeffrey O. 140
Ashcroft, John 322
Auner, MD, David 236
Avioli, MD, Louis V 634
Bae, PhD, Maueun 648
Balas, MD, PhD, E. Andrew 588
Barone, MD, Constance M. 68, 576
Bass, MD, Barry 237
Bartholomew, PhD, W R 596
Baudendistel, MD, PhD, Lawrence 634
Bauer, J. Christopher 184
Beck, RN, MSN, JD, Mary 333
Beitman, MD, Bernard D 282, 322
Belt, Tammy .... Feb. cover
Bennett, JD, Andrew K 624
Bennett, MSW, MBA, Tom 10, 65, 216, 286, 322, 734
Bentley, Roseann 323
Berg, MD, Leonard 336, 576
Bergin, BA, LeeAnn 685
Blaine, MD, James R 563
Blue, MD, J. Mark 95
Blythe, MD, James G 228, 728
Bode, Frederick 184
Bohigian, MD, George M 566, 728
Bongu, Anu 280
Boyd, MD, FACS, James H. 145
Bozard, MEd, Colleen C 685
Bradley, Marilynne .... March Cover
Bradley, MD, Richard V. 63
Brandenberg, MD, PhD, Gregory 42
Braun, MD, Alan 237
Bruce-Wolfe, PhD, Virginia 303
Bryan, MD, Alpha Fowler 339
Bucholz, MD, Richard D 336
Buffaloe, MD, Robert N 16
Burkardt, MD, Diane 15
Carrier, MD, John A. 618
Case, MD, William 237
Cernick, MD, Christine 237
Chalk, Eileen 683
Chang, PhD, Jian C 693
Chapman, Jean 15
Chapman, Nona Nan 167, 246, 684
Chehval, MD, Michael J. 585
Choi, MD, PhD, Dennis W. 120, 228
Christiansen, MD, Sidney G. 283
Clark, MD, Jennifer 758
Colapinto, MD, FRCS(C), Edward V. 42
Cole, JD, Clark H 581
Comas, MD, Manuel 233
Cooper, MD, E. Leon 339
Cox, MD, James L 677
Cripps, Helen M. 324, 572
Crowley, Jr, MD, William J 562
Cruz-Flores, MD, Salvador 296
Cryer, MD, Philip E 576
Cunningham, MD, Milamari 757
Del Priore, MD, Lucian V 68
Dempsey, MD, Maureen E. 81
Detwiler, Edward G. 65
Digthon, Pattye 249

Donnell Jr., MD, MPH, H. Denny 346
Drzymala, PhD, Robert E. 188
Dulle, CPA, Sidney A. 176, 615
Dyer, MD, Gary A 634, 677
Eason, Michelle 280
Elder, MA, Susan 640
Elfrink, MD, Melanie 760
Elfrink, MD, Roy J 760
Ellis, Jean H. 214
Estrem, MD, Scott 277, 731
Evens, MD, Ronald G. 634
Farrell, John S. 185
Feighny, PhD, Karen 685
Filiput, R.N., Eric 188
Fiorella, MD, Russell 298
Fitzmaurice, BS, Sean 146
Flance, MD, I. Jerome 728
Flance, Rosemary 728
Fortune, DO, MPH, Gary J. 588, 640
Fraser, MD, Victoria 728
Gaines, MD, Robert W. 68, 95
Galate, MD, Joseph F. 95
Gale, MD, Arthur 8, 116, 290, 574, 628
Garfinkel, MD, Bernard T 576
Gelberman, MD, Richard H 577
Glenn, MD, Theodore 235
Gnatz, MD, Steve M. 68
Goldman, MD, Gordon 322
Goldring, MD, Sidney 16
Goldstein, MD, E 596
Gondring, MD, William H 282
Groshong, MD, Ted 16, 237, 752
Grossberg, MD, George T 336
Hacker, Teri 323
Hagan, III, MD, John C. 19, 73
Hagan, MD, Robert A 693
Hahn, MD, Frederick 165, 212, 213, 245, 270, 321, 564, 614, 667
Hahn, Marge 213
Hardy, MD, David 640
Harris, CPA, Larry L. 176
Hawatmeh, MD, FACS, Abraham S 705
Hay, MD, Donald P. 336
Hayat, MD, Ghazala 252, 296
Heimburger, MD, Richard A 728
Hegemann, MA, Brad 588, 640
Helikson, MD, Mary Alice 68
Herr, MD, Timothy M 569
Hornstra, MD, Robijn K 303
Howard, MD, Todd 634
Howell, Jeffrey S 119
Hruza, MD, Luciann 228
Hunter, MD, James K 322
Jalali, Amir 249, 280
James, MD, Elizabeth 754
Jantsch, MD, Debbie 586
Jenkins, MD, Edward R. 222
Jimenez, MD, David F. 42, 68, 576
Johnson, MD, Lenworth 172
Kaskowitz, Lawrence S 322
Kelly, Thomas 339
Kiekhaefer, MD, Ted 634
King, Larry 185
Klein, M.S., Eric E. 188
Kleindorfer, Dawn 585
Korsmeyer, MD, Stanley J 576
Kovac, MD, S. Robert 120
Krechel, MD, Susan 68
Kwon, PhD, Ik-Whan G. 648
LaFerney, BSBA, MHA, Russell 588
LaFerriere, Keith 15, 237
Lal, MD, Sunder M. 90
Lipoff, MD, FACC, Jay I 358
Lockett, MBA, Mary Ann 696
Loftus, MD, Loretta 185, 228
Longo, MD, Walter E. 646
Loomis, Jr., MD, James F 577
Lorenz-Michaletz, CMD, Martha 188
Lowell, MD, Jeffrey 634
Luebbering, Theresa 588
Lund, MD, Herluf 236
Mahon, Rose 669
Malkoff, MD, Marc D 336
Mallouk, Carmen 683
Malone, MPH, Bernard R 683
Maurath, RTT, Janet 188
Masters, MD, Edwin J 346
McArthur, MD, PhD, Carole P. 298
McCown, MD, Allan 237
McCown, Claire "Sunny" 148
McKinsey, MD, David 638
Mehr, MD, David 576
Meyer, Jan 120
Meyer, MD, Jerry 237
Meyer, Randall E 16
Michalski, MD, Jeff 696
Miller, Julie 120, 281
Mills, CPA, MBA, Patrick J 338
Mirza, MD, Waqar 296
Mitchell, Sandra 149, 323
Mohyuddin, MD, Yusuf Ata 252
Morrow, RN, JD, Jo Anne 725
Mott, MD, Kevin 764
Muelleman, MD, FACEP, Robert L 685
Munro, MD, J. Stuart 303
Murrell, Beverly 213
Murrell, H. Jerry 213, 244
Naunheim, MD, Keith 252, 646
Neikirk, MA, Helen J 588
Nishioka, DMD, MD, Gary J 327
O'Brien, Jr., MD, Edward J. 634
O'Sullivan, MD, Daniel 238, 720
Odell, John Aug Cover
Oro, MD, John 42,68
Overdeck, Daniel 249
Parr, PharmD, T 596
Parsons, MD, David 71, 113, 621, 675
Payne, MD, Meredith 585
Peck, MD, William 68, 576
Perez, MD, Carlos A 696
Perry, Michael C 16
Perryman, MD, Chris 236
Petit, MD, Carl A 336
Pirner, LPN, Janice 640
Pulchalski, Robert 120, 249, 281
Raich, MD, Robert Anderson 284
Reed, Nevada 120, 281
Renner, Gregory 15, 169, 327, 569
Rich, MD, Keith M. 188
Roberts, MD, Gregory 621
Rose, MSN, RN, Sharon K. 90
Ross, Jr., MD, Gilbert 90
Ryall, MD, Jo-Ellyn 230, 585
Sagduyu, MD, Kemal 303
Saran, MD, B.M. 298
Sawyer, MD, Devin R. 645
Schroeder, Jr., DO, MD, FACS, Walter 193, 592
Scott, MD, FACP, Allen 185
Seward, MD, P. John 82, 232
Shaeffer, MD, James 236
Shenoy, MD, Surendra 634
Shively, MD, Robert A 577
Silbergeld, MD, Daniel L 577
Simpson, MD, Joseph R. 188
Sipes, Richard 249
Smith, MD, Mark W. 90
Sparkman, MD Tom 237
Starnes, Lizabeth 250, 584
Steck-Malone, Carla May, June July Cover
Steele, MD, FACEP, Mark T 354
Stewart, MD, Walter L. 284
Stonnington, MD, Henry 68
Strawhecker, Kristin 280
Sullivan, MD, David J. 120
Swarens, C.C. 13
Swift Jr, Robert J 615
Sword, MD, Susan Haynes Oct. Cover
Taheri, Matthew 182, 616
Taylor, Maura 683
Templer, MD, Jerry W 71, 113, 675
Thomas, MD, Horace 172, 233
Thomas, MD, J. Regan 7, 58, 110, 162, 269, 561, 613, 634
Tingley, MD, Warrern F 234
Treadwell, MSN, Janet E. 330
Treadwell, MD, Randall 330
Uhrig, MD, FACP, Jack 185
Vande Lune, MD, Daniel W. 296
Vannier, MD, Michael W 728
Varvares, MD, Mark 145
Vickers, RPh, M K 596
Vogel, CPA, JD, Paul L. 324, 572
Vogelsmeier, JD, Stu 671
Vollmar, Jr., MD, MBA, MA, Lewis 216, 286
Walker, MD, FACP, ACEP Sara 185
Walters, MD, Frederick P 705
Wankum, Jean 149, 246, 248
Wasserman, MD, Todd H. 188
Watson, MD, Trevor 759
Watson, PharmD, ABAT, William 354
Watters, JD, Rick 671
Wax, MD, Martin B 283, 577
Weathers, LPN, Rhonda 588
Weiser, Dennis 161, 344 Apr., Jan. Covers
Wells, Jr., MD, Samuel A. 282
Wilder, RNC, PNP, Barbara 675
Williamson, MD, Walter E. 284
Winton, Mark D 16
Wolfe, MD, James 230
Wood, MS, MBA, Mike 734
Wooldridge, MD, Wilfred E. 274, 668
Wooster, DSc, Claire A 705
Wren, Megan 185
Wright, Sheila 323
Zitsch, III, MD, Robert P. 169, 225, 327
Zorumski, Thomas J 338
Zylka, MD., Michael J 236

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